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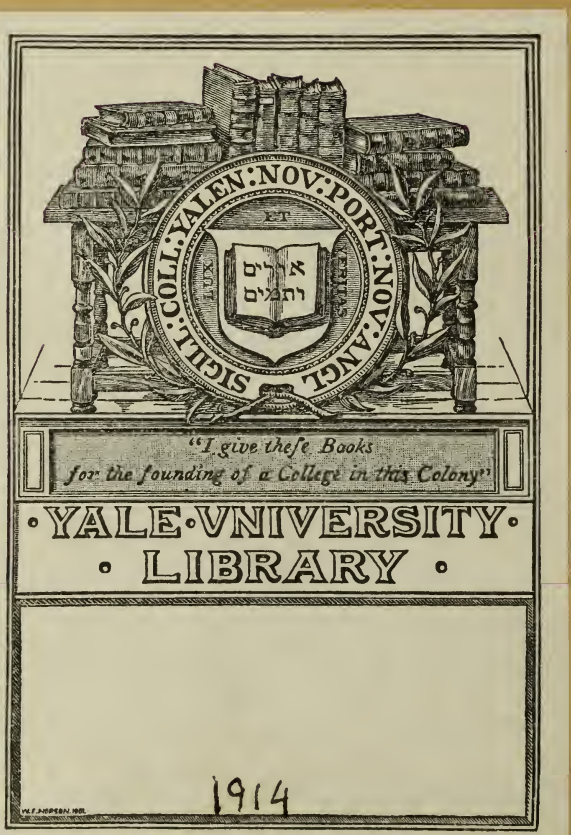

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PHYSICAL EDUCATION IN PUBLIC SCHOOLS, WITH SPECIAL REFERENCE TO THE UNITED STATES.*

By J. M. Anders, M.D., LL.D.

THE importance of physical education, particularly in our public schools, is year by year becoming more evident and convincing. At the outset the question may pertinently be asked in all seriousness whether educators have lived up to their reasonable responsibilities in the past, admitting the supreme importance of keeping the body strong and healthy as a prime requisite in racial supremacy.

The conception entertained in Germany and other European countries of the duty of the community toward the child is a broader one than that which prevails in most of our American cities. German cities have also introduced much physical education into their school courses, thus making their educational system meet the needs of the future adult population. They fully realize that the commercial, industrial and political outlook of a nation must ever depend upon the universality of the best sort of elementary education, an education that pays due consideration to both body and mind development.

The genius of certain men whose minds found lodgement in infirm and delicate bodies is often advanced to show that large accomplishments, and an inferior, handicapped physique go hand in hand. For example, in this list of notables we are informed belong Chopin, Stevenson, St. Bernard, Heine and many others. Most writers are inclined to lose sight of the physiologic principle that man's powers of resistance bear a definite and practically direct relation to his muscle power, and some at least of the men of large achievements mentioned above were possessed of great muscular strength, brought about principally through systematic

*Read at the Fourth International Congress on School Hygiene, at Buffalo, N. Y., August 28, 1913.

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physical exercise of one kind or another. Granting that there are definite, isolated instances of the sort, yet either as a class or individually they do not rank with those geniuses whose minds are housed in a tabernacle which supplies the largest amount and purest stores of energy material. Says Dr. James Frederick Rogers[1] on the point at issue: "It stands to reason that the more well ordered the body, the more active and vigorous the mind, and that anything which depresses the proper functioning of the physiological machinery must impair in so much the product of that organ, both in kind and amount."

In general, America is well in advance in sanitation, and the death rate can compare favorably with that of any other country, but, if the foregoing statements be accepted, we are not bestowing sufficient attention upon the question of physical education of the child—the man and woman of tomorrow. There are about 20,000,000 pupils in the public schools, and to ensure their future usefulness nothing is more vitally important than an harmonious, unbroken balance between the growth and development of mind and body.

A regular system of school inspection, which is carried out in about two-fifths of the pupils at the present day in America, is to be advised and encouraged until it shall have been extended to the whole number, as an aid to the attainment and preservation of sound health. Those in authority need to be urged to sanitate more thoroughly our public school buildings, since many of those in existence are unsuitable, being uncleanly and uncomfortable, as well as ill lighted and ill ventilated. Obviously so long as schoolrooms are a distinct menace to the health of the pupils and school inspection is not universally adopted, full success from a course of physical education, however excellently conducted, is not to be expected.

At present writing it should easily be possible to establish a general acceptance of the principle well known to hygienists, that good muscular development is equivalent to good physical development. Educators must assume the heavy responsibility of carrying out a form of physical training that is not less important as an urgent economic factor, or civilizing agency supposed to yield increased health, usefulness and happiness than mental training, but which proportionately receives insufficient attention in most cities at least. It is to be hoped that this Congress will produce many pioneers in the advancement of regular and adequate physical education in our public schools.

Among the recognized agencies to keep the body in health and to prevent its germicidal powers from running low, an adequate quantity of muscular activity is of first rate importance—more than this its general and rational enforcement among growing children in our public schools would have a vital effect upon the far-reaching future of the American race. A proper interest in

[1] *Popular Science Monthly*, July, 1913.

the national physique can be shown only by concerted effort on the part of educators to bring about an evenly balanced condition of mind and body during childhood and adult life.

Whether the prime motive is economy or is humanitarian, improved bodily training is urgently needed and the outlay in energy and money required to accomplish this object is only a tithe of the amount now lost.

The well-nigh universal tendency to push the head at the expense of the muscles and sinews in our public schools, colleges and universities is deplorable in the extreme. It might be argued that an awakening to the situation with respect to the question is now in progress among those charged with the duty of educating the youth of our land and that physical culture has become an integral part of the curricula in many quarters. Granting the correctness of this view, it may be nevertheless affirmed that as compared with the time and energy allotted to mental training that given to physical culture is wholly inadequate in by far the majority of American cities at least.

The playground movement, to which reference is made hereafter, for the benefit more particularly of children in our public schools, is deserving of every encouragement, although its advantages are to be regarded as being merely supplementary to those of a systematic training under the charge of a competent physical instructor.

The consensus of opinion among those who have examined the question critically is to the effect that the human race is slowly undergoing muscular deterioration, and writers have cast about them for causes which may be held responsible for such a lamentable state of affairs. Dr. Friedman, in discussing the question in its relation to the American race, has emphasized two main considerations in endeavoring to account for our lack of physical stamina, namely, the ingestion of physically inferior races from abroad and our own mode of living, especially the undoubted trend away from occupations requiring the use of the voluntary muscles. He further argues that this is poor economy, because our bodies are unable to supply the divers needs of our over-active mind.

Surely it is none too soon to agitate the question of giving due attention to methods intended to counteract the tendency toward increasing over-activity of the mind—in short, toward the too strenuous life. The principal aim should be to maintain the harmonious balance betwixt mind and muscle by regular and rational muscular exercises, which should obviously be enforced *pari passu* with the mental training and development and graded to suit the age and physical condition of the individual pupil. The infant and young child will under favorable conditions take sufficient physical exercise, but unfortunately education begins too early in life, and, what is worse, soon develops into a "high-pressure" system at the

expense of bodily vigor, since sufficient time is not allowed for regular muscular training and supplementary exercises.

I am in entire accord with the view that instead of starting the child at the public schools at the age of six, as is the present custom, it were better to imitate the ancient Greeks, whose children were sent first at the age of eight. As bearing on this question I quote again from the timely article by Friedman: "Were the two years from six to eight spent in preventing the development of any tendencies toward physical defects, or correcting those that have already developed, and in forming in the child the habit of physical exercise, the time would be more profitably spent."

Good muscular development, prudently maintained, brings with it good chest expansion, a circulation normally carried on, normal vigor and activity of mind and splendid digestion, as well as assimilation—in a word sound health. This is the most valuable asset which the child can possess, furnishing an escape from pulmonary tuberculosis later on, from spinal curvature, chronic dyspepsia, neurasthenia, and doubtless many of the acute infections owing to the increased resistance offered by the system.

Such a course would not entail loss of mind development, it being an established fact that both the intellect and understanding develop without instruction during early childhood, and that the child learns more easily and comprehends more quickly for having commenced later on. What could be more logical or more natural, in view of the foregoing facts, than for our educators and school boards to unite in a new and improved plan, having for its object the assigning to physical education its rightful place in the education of the juvenile mind.

The changes required in the present curricula of our public schools would be found to present no insurmountable difficulties, since sufficient definite instruction in physical culture could be given—with but little expenditure of time—in a single hour per day. Perhaps the principal obstacle to such a course at present would be a lack of properly qualified instructors, which are indispensably necessary. The physical training should be flexible and adapted both to the class and individual, so as to insure the completest physical development without risk of harmful effects. In some of our cities, *e. g.*, Philadelphia, a period of 15 minutes is given over to physical exercises daily, and these are carried out under the direction of the regular teachers, there being no specially or properly qualified teachers to supervise the work for the great majority of the classes. Hence in Philadelphia, and the same is true of other municipalities, as a consequence of lack of time, teachers and facilities, physical education may be in all fairness said to be wholly inadequate.

A clearer conception of the physical benefits of systematic and proper muscular exercise, and the manner of their production, should be more generally entertained, especially among those responsibly and directly connected with the education of mind and

body of the rising generation. The primary effect of increased activity of the muscles is to stimulate the process of oxidation whereby the production of carbon dioxide is hastened and the demand for oxygen is enlarged; these deviations from the normal tissue changes are accomplished by augmented respiratory activity. It is the increased exchange of carbon dioxide and oxygen taking place in the muscles themselves that promotes the normal metabolic processes (nutrition) and muscle power, as well as the general health of the human economy.

It may assist some of my hearers to an intelligent understanding of the principles and practical application of the scientific phase of the subject if I briefly present a few added physiological details. There is a constant process of decay going on in every tissue of the body, the waste products being eliminated by certain excretory organs, namely, the skin, lungs and kidneys. Now, it is these disintegrating and eliminating processes that are facilitated by muscular activity, while at the same time through its invigorating effect upon the circulation of the blood the same structures are properly repaired by the increased amount of renovating materials thus brought to them.

Rest after muscular exercise is not only beneficial, but necessary in view of the fact that during the period of activity more energy is utilized than is produced, so that a call upon the energy stored during previous periods of repose is made. Not only must rest follow exercise, but it must be alternated with recreation.

Notable advances have been made in recent times in the majority of American cities in the matter of providing opportunity for supplementary recreation exercises in suitable playgrounds and excursions on holidays and during the summer vacation to the country. The scheme pursued in Paris of appointing directors of sports, who, on holidays in the parks and playgrounds, induct the young Parisians into the kinds of outdoor games and exercises most suitable for adoption with a view to their proper physical development, might be profitably imitated elsewhere.

There is, however, a real danger in permitting the weak and delicate to participate in games for which they are totally unequal. On the other hand, in general, healthy boys may be left to their own inclinations as regards their recreative exercises. The tendency to specialization in athletic sports is to be deprecated everywhere, and with respect to competition in games in elementary schools, or, indeed, before the age of 18 years, I do not hesitate to state that the physical damages sustained far outweigh any advantages that may possibly accrue therefrom.

The educational advantages or habit-producing effects of systematic exercises in youth are scarcely less important as a factor in physical development than an improved organic vigor and increased endurance as the result of muscular activity. It is a matter of common observation that if the habit of taking muscular exercise be formed thus early, it is more likely to be maintained dur-

ing after life than if physical training be first taken up at a later period.

The pupil learns incidentally the true value of ventilation both at school and in the home. More important is the training of the child for submissiveness to control and for methodical arrangement. Physical culture, as is well known, also strengthens the will power and makes for greater alertness and quicker perception.

If the foregoing arguments be accepted, then the methods to be pursued would naturally call for consideration here. The details of the subject, however, do not belong to my theme, although graded lessons, which have been ably advocated by William A. Stecher, G.G., in physical training and games, are to be strongly advised and encouraged.

At present writing physical culture in the public schools in general is in a transition stage, a stage that can scarcely be said to be replete with promise of the dawn of that day when the body shall receive proper cultivation. There is urgent need of safeguards against what has been aptly termed "the mechanical and perfunctory tendencies of routine officialism." Lastly, those bodies which are in immediate control of our elementary educational system cannot much longer neglect the subject of physical education without inviting the just censure of public and professional opinion.

Pyorrhea Alveolaris. By Friedrich Hecker, B.Sc., D.D.S., M.D., Member of the Academy of Sciences of St. Louis; Consultant at Bell Memorial Hospital of the School of Medicine, University of Kansas, Rosedale, Kan.; Consultant at St. Margaret's Hospital, Kansas City, Kan. Illustrated. St. Louis: C. V. Mosby Company. Cloth, $2 net. 1913.

Heretofore pyorrhea alveolaris has attracted but little attention, but today it is recognized as the possible original seat of many bodily ailments. It is definitely proven that pyorrhea alveolaris is the starting place of diseases of the ear, nose, tonsil and general system. It is a potent cause of rheumatism. Therefore, it is well that investigators are beginning to devote attention to this trouble. That it can be produced by traumatism is excellently demonstrated by the frontispiece, which depicts an artificially produced pyorrhea alveolaris in the teeth of a guinea pig. The first chapter the author gives over to a classification of the varieties of this trouble. He then goes thoroughly into the bacteriology of the affliction, and, in turn, pathology, technic for making vaccines, vaccination and local and prophylactic treatment. He is firmly convinced that the disease is amenable to treatment, and that the time is not far distant when the general practitioner will be able to handle the malady successfully. It is a novel little monograph, which should command the attention of the profession. Besides, it should direct attention to a malady which has been the recipient of too little notice.

BRILL'S DISEASE*

COMPARISON OF FOUR CASES WITH CASES OF TYPHUS FEVER TREATED BY THE AUTHOR.

By Albert E. Roussel, M.D.

Associate Professor of Practice and of Clinical Medicine, Medico-Chirurgical College; Visiting Physician to the Medico-Chirurgical Hospital and to the Howard Hospital, Officier d'Academie, France, etc.

Nicolle of Tunis, Africa, in 1909 demonstrated that the chimpanzee could be inoculated with typhus fever, and Anderson and Goldberger, in Mexico, were able to infect monkeys with blood taken from typhus fever patients. These results were further confirmed by Ricketts and Wilder, and also by Gavino and Girard. Typhus fever is transmitted by the bite of the body louse and the head louse, and by subcutaneous injections of these crushed insects. It is interesting to note in this connection that more recent work regarding the transmission of recurrent fever by the louse (Nicolle, Blaizot and Conseil, 1912,) show that the spirilla of this disease cannot escape from this insect while it is alive; infection is held to take place as a consequence of scratching and crushing the lice, whereby the spirilla are set free and may be carried on the nails to excoriations and to the conjunctiva and thus enter the blood and cause recurrent fever.

Dr. N. E. Brill, in 1911 and 1912 and August 16, 1913, reported in three communications 321 cases occurring in 14 years, one fatal, of "a new disease which in some respects resembled typhus." Two other deaths since reported. Early in 1912 Anderson and Goldberger demonstrated by inoculation experiments that the condition really was typhus in a mild form and that the disease was not merely of historic interest, but was endemic in the United States. While Dr. Brill does not consider that their evidence as to the identity of Brill's disease and typhus is conclusive, we believe that it is generally accepted as being so. The rhesus monkey can be infected by inoculation with blood from a case of Brill's disease and after recovery is immune to reinfection; also to infection with virulent blood from a case of typhus. Monkeys which have recovered from infection of typhus are likewise immune to infection from Brill's disease. Although the disease in New York and other cities is mild and has shown little tendency to spread, it is apparently on the increase and may possibly acquire virulence and epidemic prevalence.

The cases I have to report follow:

Case I.—On the evening of February 19, 1912, I was called in consultation by Dr. Frank Hurlock to see Mrs. L., American, married, age 53 years, living in a residential portion of the city and in good social position. The husband is superintendent of a large

*Read before the Pennsylvania State Medical Society at Philadelphia, September 24, 1913.

express company, and necessarily brought in contact with a large number of employes.

The patient was in her usual good health until after having gone to bed on February 14, when she was seized with a decided chill, followed by a temperature of 103.2 and violent vomiting and headache, pains in back and limbs, face flushed, injected eyes, pupils small. The symptoms and temperature increased and on the afternoon of the 19th there appeared (in places confluent) a bluish red macule-papula eruption, together with interspersed petechiae on the abdomen, thorax, arms and thighs. When I saw her the temperature was 104.2, pulse 115. Rash fades slightly, but does not disappear on pressure. The face was flushed, eyes injected, spleen enlarged. Urine diminished; otherwise normal. Later slight ring of albumen, diazo negative. I remarked at this time that the general appearance of the case reminded me much of the typhus I had seen at the Philadelphia hospital and asked permission to see her the next day. Previously to the next visit I reread Dr. Brill's paper and then had no hesitation (February 20) in accepting it as the same.

The fever lasted 14 days and then terminated by crisis. The patient was apparently so ill on the thirteenth day that I was again called in consultation. The temperature at this time was 105.2, pulse 120, low muttering, delirium herpes facialis, tongue dry, cracked and brown. Constipation. Agglutination tests for typhoid and para typhoid negative. Blood cultures negative. Convalescence was somewhat prolonged.

Case II.—Seen in consultation April 2, 1912, with Dr. H. N. Diamond.

Mrs. Z.; Russian; age 50 years.

In this country six years and enjoyed good health. Sudden onset four days previously, with decided chill, marked headache, injected eyes; temperature 104-105. Slight morning remission. Pulse 115-125, low tension, marked prostration, tongue dry, thick yellow coating, active, delirium at night and from third day until crisis, which took place on seventh day with rapid convalescence. Spleen palpable. Rash appeared on third day (one crop) on thorax and back and later on limbs; maculo-papular darkish red; does not disappear on pressure and is seen during early convalescence. Urine, traces of albumen. Widal negative. Marked sweating at time of crisis.

Case III.—R. S. at 24 years; male; Russian; salesman. Seen June 5, 1912. Was in store yesterday when, at 4 P. M., suddenly seized with several chilly feelings and sick stomach, headache and general pains. Face flushed, injected eyes, pupils small. Spleen one inch below ribs. Temperature this P. M. 103.2, pulse 110. Some cough, and on examination sibilant and sonorus rales generally distributed. Fever and symptoms continued, temperature reaching 104.2; slight morning remission; pulse 115 until crisis, with sweating, on eleventh day. Constipation. Blood, red 3,250,-

000, hem. 70 per cent., whites 17,000, 80 per cent. polynuclear, average sys.; pressure, 115. Rash appeared on fourth day on trunk and extremities with petechiae, bluish red and not affected by pressure, subcuticular mottling in groins and axella. Agglutination tests and blood culture negatives. Urine, no albumen, slight diazo reaction.

Case IV.—Seen in consultation with Dr. L. Averett on August 22, 1913. Russian; male; at 60 years; cigarette manufacturer. Sudden onset on August 19; headache and general muscular pain, anorexia, constipation. Temperature, August 20, 102.3; pulse 108. symptoms same; face slightly flushed, injected eyes. August 21 rash appeared over trunk and extremities, maculo-papular, not affected by pressure. Morning remission of but one degree. August 22, temperature 103, pulse 112; dry tongue; symptoms more marked and evidences of prostration; spleen, distinctly palpable. Urine scanty, sp. Gr. 1025, acid, no albumen. Blood, reds 3,200,000, hem. 70 per cent., whites 15,000. Systolic pressure 110. August 27, delirious at night; temperature 103, but temperature fell by crisis to 97.5 on morning of the 28th with rapid convalescence. Urine normal.

Resume of Brill's Disease.

After a short invasion period of apparently three to four days, sometimes attended by the more or less usual prodromal symptoms of headache, anorexia and general malaise, there occurs the sudden onset with a chill more or less severe, sometimes vomiting, marked headaches (in some cases delirium), pains in back and limbs. Early and comparatively marked prostration. The temperature at onset is generally 102 or 103, and reaches its maximum of 103-106 on the second or third day, and this continues throughout the course of the disease with but slight morning remissions until the termination by crisis. The pulse ranges from 110 to 120 or more regular and soon becomes of lower tension. The face is generally flushed, particularly at the malar prominences, and expression anxious. The eyes are injected and the pupils are apt to be contracted.

The tongue may at first be moist with a whitish coat, but later is apt to become dry and brownish.

The skin is dry and on the fourth (author's case No. 1) to the sixth day there appears a darkish red maculo-papular eruption, at first on abdomen and back, then rapid spreading to thorax, arms and thighs, sometimes hands and feet, but rarely above the neck. It does not come out in crops, is slightly elevated 2-4m., irregular, round or oval in shape. It diminishes in color, but does not disappear under pressure ever at first, and becomes more reluctant to do so later in the disease. In all of my cases it persisted for several days after the establishment of convalescence, and in Case I pigmentation lasted about 10 days. Brill observed herpes labialis in 6 per cent. of his cases. More than this, in three of my four

cases petechiae were interspersed in the immediate vicinity of the eruption. This fact has also been reported by other observers.

The urine is diminished in quantity, sometimes contains a slight amount of albumn and occasionally dark granular casts. Autopsy in Brill's case showed congestion and parenchymaous degeneration of the various organs. Diazo occasionally found. Constipation exists, although diarrhea may come on at or near the crisis. The spleen is generally increased in size. There is sometimes a precritical rise of temperature and accentuation of symptoms previous to the crisis, which takes place from the ninth to fourteenth day. With the establishment of a rapid convalescence and apparent total abscence of relapses.

Complications are not frequent, although bronchitis is comparatively frequent, and broncho pneumonia has been observed, as has been otitis media. Apparent signs of meningitis, delirium, stiffness of neck, Kernig's sign, has been observed.

E. Libman of Johns Hopkins showed that blood cultures in Brill's were absolutely negative. Leucocytosis present, 10,000-22,000.

Evidences of contagion are rare, but Coleman reports four cases in one family, and Morris J. Lewis, in a report of 13 cases, extending over several years, that occurred at the Pennsylvania Hospital, mentions that five cases occurred, one after the other, in one house, and that one of the internes at the hospital in whose ward the mother of the family was cared for, contracted quite a severe attack of the disease. Incidentally it is curious to note that this is the only report on Brill's disease that I have been able to find from Philadelphia or the State of Pennsylvania. Almost all cases reported are Russians. Cases are reported by Louria of Brooklyn, Ziegre of New York, Lewis and Parek of Milwaukee, Lee of Boston, etc.

Conner saw three sisters who contracted the disease almost at the same time. Louria saw three cases in same family taken at same time, which he considered typhus, but now believes them to have been Brill's disease.

During the winter of 1883, while interne at the Philadelphia Hospital, it was my privilege to observe 47 cases of typhus fever and to treat the greater number of the same with a resultant mortality of about 35 per cent. The first cases were sailors, temporarily living in the vicinity of Front and Catherine streets, but subsequently other cases were brought, natives of the city, living in or near the same neighborhood, and, in addition, cases broke out in the almshouse immediately connected with the hospital. During the epidemic a nurse in charge of the male ward and the runner or messenger contracted the disease and both died within five days of the onset.

The average history of these cases read as follows:

Prodromal symptoms infrequently present. Sudden onset with a more or less decided chill (frequently attended by vomiting),

followed by a rise of temperature to 103 or 104, which reaches its maximum of 105, 106 or 107 on the second or third day, and continued with slight morning remission until the termination, usually by crisis, which generally occurs from the ninth to fifteenth day. The pulse ranged from 110 to 140, diminished in tension from the beginning, but was not often dilrotic. Marked headaches and general pain were in evidence and early and increasing prostration. Delirium occurred in the majority of and in all of the fatal cases. The face was flushed, the eyes invariably injected. The tongue at first coated with a white fur, soon became dry and coated. Herpes was occasionally observed. As a rule constipation existed, but diarrhea sometimes occurred at or near the time of the crisis. The rash occurred from the fourth to sixth day on chest and abdomen and rapidly spread to extremities. Macula papula, irregular outline, slightly raised and diminish at first and later not influenced by pressure. Petechia frequently interspersed. In some of these, and even fatal, case the rashes, although markedly similar, are less profuse than in the cases of Brill's I have reported. Enlarged spleen generally present. Subcuticular mottling was occasionally observed. No blood examinations were made, but a moderate leucocytosis is known to be present in typhus fever. The urine was diminished, generally contained albumen, but nephritis was rare. The convalescence was rapid. Complications were rare. Most of the fatal cases seem to die from the toxemia, although many exhibited hypostitic congestion of the lungs, and a few others pneumonia, generally broncho pneumonia. Relapses not observed.

Most of the fatal cases were posted by either Dr. Formad or Dr. Shakespeare and were chiefly typical by their negative aspect.

A comparison of the cases of Brill's disease and typhus fever show such an unmistkable similarity that personally I must accept them as the same, and in this I am supported not only by the experiments on animals already referred to, but by almost all observers, including those who have seen typhus, and also the Boston Board of Health. Had there been any specific bacterium or biological reaction for typhus the problem would have been easy and consequently only two resources were available, first, inoculation experiments in animals, and, secondly, further clinical investigation.

Brill's two main objections to the identity with typhus are: 1. Contagion of typhus is marked, yet until recently the same was said to be true of yellow fever and other diseases, and it is more than probable that true typhus is only infectious. Not only are there apparent cases of the same communicability in Brill's disease, but, as it is agreed that it is only an attenuated form, this would probably diminish it.

2. Mortality of typhus is 15-10 per cent., of Brill's less than 1 per cent.

It should not be forgotten that mild and sporadic cases of typhus fever have long been recognized in Europe. One Russian ob-

server—Javorovsky—reports 45 cases without a death. Beard, and also W. Goodall, of London refer to very mild epidemics. Lee of Boston says that mild and sporadic typhus has existed in Boston in the past 10 years, and that at the Massachusetts General Hospital the ratio is 1 of typhus to 47 of typhoid. Smallpox in Pennsylvania, after the Spanish-American War, was of such a mild type that the mortality was less than 3 per cent., yet is it worthy of note that it subsequently returned to its usual fatality.

COMPARISON.

Typhus Fever.	*Brill's Disease.*
Acute infectious disease, unknown origin	Same.
Prodromes generally not marked	Same.
Sudden and pronounced onset, headache, chill and general pains, nervous symptoms	Same.
Temperature at first high, reaches maximum second or third day, slight morning, generally terminates by crisis	Same.
Eruption appears third to fifth day, one crop on abdomen and chest and then extremities. Dark red spots irregularly grouped, only slightly modified by pressure and interspersed with petechiae	Same.
Moderate lucocytosis	Same.
Complication not common. Generally broncho pneumonia	Same.
Spleen moderately enlarged, especially early in case	Same.
Duration, 7 to 14 days	Same.
Blood cultures negative	Same.
Post-mortem shows no special lesion other than those associated with fever	Same in the case reported by Brill.
Rapid recovery	Same.

It would seem to me that there can be little doubt that many cases of Brill's disease or typhus fever must have been overlooked in the past and mistaken for typhoid, paratyphoid, influenza, etc.

Time allotted prevents my going further in the question of differential diagnosis, but although the diagnosis between typhoid and typhus fever has always been a difficult one in the past, it should be far easier in the future because of the agglutination tests, white blood counts and blood cultures.

This error is particularly to be avoided, as it is more than possible that Brill's disease may return to the usual typhus mortality. For this and other reasons it would seem wise and proper that this disease should be made reportable by the different Boards of Health, as has already been done by the city of Boston, and that disinfection should be applied.

And in conclusion it would seem to the author that this will explain the hitherto inexplainable instances of the occurrence of sporadic typhus in the past.

2108 Pine St.

INFANT MORTALITY AND ITS REDUCTION.*

By J. H. Mason Knox, Jr., M.D.,
Baltimore, Md.

The presentation of the subject of Infant Mortality and Its Reduction is fortunate in its situation on the program, for the saving of infants' lives in its broadest sense consists not only in efforts to help babies already born, but includes all endeavors to have babies started healthy in their struggle for existence.

The campaign for the preservation of infant lives, therefore, must rest upon the rapidly developing science of eugenics as its foundation. But again, if the fight for the baby is to be won, this desired result must be accomplished largely by means of clean, health-giving milk; without it even the babies born healthy cannot thrive. It is fitting, therefore, that a brief presentation of the claims of the baby should come between Dr. Goddard's convincing remarks on "Eugenics" and the demonstration which is to follow from Dr. North of a practical and economic method of obtaining clean milk.

It is trite nowadays to say that the fact of the large mortality now existing under one year of age is one of the most important topics, both from a medical and social standpoint, which can be brought before any community. Of an infant population in the United States of about a million and a half, one-fifth, or three hundred thousand (300,000), is lost during the first year; a larger number of deaths than occurs from tuberculosis in all ages. A large proportion of these infant deaths are entirely unnecessary, as is conclusively shown by the varying mortality rates under one year which obtain in different countries. Thus in New Zealand but 66 babies die in every 1000 during their first year, while in Chile more than 300 per 1000 perish. In the United States, although statistics are lamentably defective, it is estimated that the infant death rate is approximately 150 per 1000. The colored infant mortality is notoriously high, probably about double the general infant death rate. Baltimore contributes her full share to this inexcusable loss of infant life. In this fair city there are about 15,000 babies born each year. Of these 2000 die under one year of age. These fatal cases may be very roughly divided into the following groups:

Congenitably weak or deformed children	600
Children suffering from gastro-intestinal or nutritional disorders	700
Children suffering from pulmonary diseases	400
Children suffering from other infections and unclassified diseases	300

*Summary of address delivered May 5, 1913, at a meeting held at McCoy Hall under the auspices of the Women's Civic League. The other speakers were Dr. Henry H. Goddard, Vineland, N. J., who discussed the "Problems of Eugenics," and Dr. Charles D. North of New York, who spoke on "Clean Milk and Its Production."

Certainly half of this large death rate could be prevented with fairly adequate methods. Comparatively little can be done for the first group—those congenitally weak or deformed, probably 100 out of the 600 could be saved. A much larger proportion of the deaths from nutritional disorders could be prevented; certainly 500 of the 700 deaths occurring yearly from these causes are unnecessary. The same is true of the third and the fourth groups. It is thought that half of the deaths from pulmonary, infectious diseases and other causes are avoidable. That is, to put the situation in Baltimore bluntly, we are permitting approximately 1000 human lives to be sacrificed at their threshold, when we know how this tremendous economic loss could be prevented.

This is the greatest of all the problems of conservation. The saving of these lives would be the most brilliant achievement of preventive medicine.

The Panama Canal is almost an accomplished fact, not primarily because of greater engineering skill than was shown by the French, but because sickness and death in the Canal Zone were prevented by approved sanitary measures. We cannot expect to do much toward curtailing the high infantile death rate when we confine our attention, as has been done for many years, to the treatment of children already ill. The causes of their undoing must be studied, and much more effort be directed by an intelligent community to surrounding the frail baby before, during and after the birth with such conditions as will insure its well-being. The infant is the only member of society, except the hopelessly insane or the extremely aged, which is entirely dependent upon others for its very existence, and because of its potential value to the community, as all the future depends upon the baby, it has certain inalienable claims which may be briefly stated:

First—The baby has a right to be *born healthy*. To insure this at least three conditions must be fulfilled:

(a) Parents must be healthy. Here the baby's problem touches eugenics. It is far-reaching, criminal negligence to permit marriages between the unfit. This can, in part at least, be prevented by requiring certificates of health from those contemplating wedlock.

(b) Expectant mothers must be cared for better than at present. To allow a woman to engage in hard labor during the last days of her pregnancy endangers both lives, and certainly lessens the vigor of the infant. In this country the infant mortality rates are highest in the large manufacturing centers where women are employed, and where they work at their tasks often until a few hours before their confinement. Every intelligent community should see to it that the expectant mothers have a reasonable amount of rest before and after confinement. To accomplish this result would be a profitable and economic investment for county or city administrations, for private philanthropy or for organized labor to bring about.

(c) Competent obstetrical care. This is so obviously the right of every mother and infant that it admits of no argument, and yet in this country a large majority of the births of our babies are conducted by incompetent hands. Nearly half the children are delivered by midwives, a very small proportion of whom have any thorough knowledge of simple surgical cleanliness. Medical students are graduated by the hundreds with the legal right to practice obstetrics who have had but little personal experience, and are quite unprepared to properly meet even the more common complications. Unquestionably, thousands of infant lives and the lives of hundreds of women are lost each year because the community tacitly permits this gross negligence to continue.

Second—The dependent infant has an inherent claim upon the community to be *reared healthfully*. This includes:

(a) Its right to its mother's milk. There is no satisfactory substitute. The infant was intended by nature to be dependent for its well-being upon its mother during the first few months after birth, as it is before birth. Any substitute for mother's milk requires an unusual amount of skill, experience and time, which it is difficult to obtain except among well-to-do people. It is a well-known fact that the mortality rate among the infants of the dependent classes is perhaps ten times as high as when mothers' milk is used. This precious function of nursing is not diminishing. A large proportion of the babies of the workingwomen can be nursed. In an investigation of over 500 women registered in The Johns Hopkins free obstetrical clinic, 60 per cent. were able to nurse their children exclusively for several months, and 20 per cent. additional required only a small amount of artificial feeding. Many physicians wean young babies unnecessarily, when a little patience and encouragement to the mother during the early weeks of the baby's life would correct the apparent disagreement of the breast milk, and greatly increase the child's chances for the future.

(b) In those infants who must be weaned the best substitute should be had. This is cow's milk of a high degree of purity, properly modified and given in suitable amounts and at proper intervals. This is the only alternative feeding which ought to be offered to a defenseless, helpless infant.

It is necessary, therefore, that all milk sold to a large city such as Baltimore should be of good quality. It ought to be absolutely impossible for any mother to procure at public sale in the city milk which is more a poison than a food. Any method, such as that advocated by Dr. North, which enables the public to secure safe milk at a moderate price should be enthusiastically welcomed.

(c) The new-born baby has a right to *proper care*. This includes fresh air, which is now denied thousands of Baltimore babies, especially in cold weather; proper clothing, sufficient attention to keep it clean and dry, and prompt medical and nursing care in the little derangements which, if neglected, always become

serious. These are, in briefest outline, the claims of the baby which cannot be denied, as they are today to a large proportion of our infant population.

To meet these claims, at least in part, the Babies' Milk Fund Association was organized. Its work has increased rapidly, owing to the generous support of the public and their response to the publicity given to its work by the *Morning* and *Evening Sun*. The association is now attempting to visit and instruct the expectant mothers reported to the large obstetrical clinics of the city, and tell them even before the babies are born of the importance of breast feeding, and to help them procure, if necessary, suitable clothes for the expected arrivals. After the babies are born they are followed by regular visits from experienced nurses throughout their first year. The mothers are encouraged to bring their babies to weekly consultations, where they are met by doctors and nurses and advised as to the care and feeding of the newly-born that often make the difference between health and disease in the baby.

Trained nurses visit from house to house, and show the mother how to prepare the baby's milk where artificial feeding is necessary, and milk of the best grade is dispensed at less than cost. These same nurses respond to all calls from physicians and dispensaries where nursing care for sick infants is desired. There are now ten centers in Baltimore from which this efficient form of ministration to the needs of the infant population proceeds. There should be at least 30 such centers. No single nurse should have more than 100 babies on her list. Some of the Milk Fund nurses have 500. As the means of the association is augmented, the number of nurses and stations will be increased so as to eventually adequately reach every dependent infant in the city.

Experience in this and other cities has abundantly demonstrated that this effort to save the dependent baby is only permanently successful when the most stress is laid upon reaching the *mothers*. No outside helpers, however skillful, can take the mother's place. She is the baby's natural caretaker; her interest is already aroused; she usually receives gratefully the visit of a tactful nurse. The difficulty is that in the majority of instances these natural caretakers are woefully ignorant; they must be shown over and over again how to prepare the babies' food in a cleanly manner; how the child should be dressed; why fresh air, even in winter, is important. If the mothers of Baltimore knew about the elementary things necessary to their baby's welfare, and were able to secure only good milk, much of the reason for an organization such as the Babies' Milk Fund Association would be at an end. This day, however, is still far distant.

The education also of the *future mothers* of the country in matters pertaining to their children is greatly to be desired. All girls in the higher grades of the public schools, parochial schools and similar institutions should be given sensible, carefully arranged instruction in personal hygiene, in household economics, and in

the feeding and care of infants. Every girl emerging from maidenhood into womanhood should enter this adult state, not only with some knowledge of her own body and its processes, but also with practical and theoretical information concerning the management of her household. These young women are to become the mothers of the future, and the caretakers of the babies of the future. Why should they be allowed to enter this sacred relationship with so little knowledge in these matters as the average American girl now possesses? Why should this knowledge be obtained, if at all, at the dreadful cost of many infant lives, when with it the average home would be much happier, and the chance for life of the future citizens immeasurably increased?

Book Reviews.

SEX: ITS ORIGIN AND DETERMINATION. A Study of the Metabolic Cycle and Its Influence in the Origin and Determination of Sex, the Course of Acute Disease, Parturition, etc. By Thomas E. Reed, Middletown, Ohio. 1913. Cloth, $3 net. New York: Rebman Company.

The scope of the above volume may be briefly summarized:

(1) A review of methods of reproduction in the animal kingdom.

(2) A review and criticism of the theories of sex determination.

(3) A demonstration of the primitive hermaphroditism of all animal organisms, and the latent bisexuality of even the higher forms.

(4) An injury into the nature of twin births and a demonstration of the importance of the study of twin births in its relation to sex determination.

(5) A demonstration of the bisexual rhythm in the germ plasm.

(6) A study of the influence of the lunar month and lunar day, not alone in its relation to the phenomena of menstruation, but also in its relation to:

(a) Gestation and other normal functions;
(b) Fluctuations in the course of infectious disease;
(c) The progress of labor;
(d) The determination of sex.

From time immemorial a solution to the problem of sex has been sought, and today, though the question of sex determination still remains an open one, the quest is as persistent. Accordingly, ever and anon an investigator supplies the world with what he conscientiously believes to be the solution. The theory attracts transient interest, is tested, found wanting, and relegated to the ash pile of exploded theories. As a matter of fact, the reviewer is inclined to the belief that this is the best solution of the matter, but as there are some who think otherwise, and who will devote their energy to the determination of this question, we have set

forth for their benefit the scope of this book. Briefly put, the author believes there is a cycle in animal life, of shorter duration than the well-known monthly cycle, manifested in the germ cells and the developed organism, and having an effect upon the determination of sex, as well as on the progress of labor and other vital processes. The author does not give this theory dogmatically to the world, but adduces clinical evidence to prove his claims. Whether he be on the right track or not is immaterial, as his reasoning is sound, unique and off the beaten path of the stereotyped discussion of the question.

A Course in Normal Histology. A Guide for Practical Instruction in Histology and Miscroscopic Anatomy. By Rudolph Krause, A.O. Professor of Anatomy at the University of Berlin. Translation from the German by Philipp J. R. Schmahl, M.D., New York. With 30 Illustrations in Text and 208 Colored Pictures, Arranged on 98 Plates After the Original Drawings by the Author. Part 1. New York: Rebman Company. 1913. Net, 75 cents.

The medical profession is indeed to be congratulated upon having an English version of Krause's Histology. It has been mainly through the effort of Dr. Krause that histology has been raised to the level of the other branches of medicine in Europe. His teachings are beginning also to have effect in the English-speaking countries, and doubtless by the translation of his book more rapid strides will be made in bringing histology into its own. Dr. Krause believes that the teaching of histology and anatomy should go hand in hand, which belief he emphasizes throughout his book. The first volume is given over to the consideration of such general and preliminary subjects as the microscope, rules for the use of the microscope, technic, stainings methods, and other basic subjects necessary to a complete mastery of the science.

The Operating-Room and the Patient. A Manual of Pre- and Post-operative Treatment. By Russell S. Fowler, M.D., Chief Surgeon First Division German Hospital; Surgeon Methodist Episcopal Hospital; Consulting Surgeon Hebrew Orphan Asylum, Brooklyn, New York. Third Edition, Rewritten and Enlarged. Philadelphia and London: W. B. Sountres Company. Baltimore: The Medical Standard Book Company. 1913.

So much depends upon the pre-operative and post-operative treatment of the patient that we are surprised that more definite instructions have not been written upon this phase of medicine. This book enters into the minutiae of this all-important side of surgery with as much thoroughness as it does the larger and more important matters. It treats of the operating room, the preparation of instrument and supplies, bandaging, anesthesia, pre-oper-

ative preparation and the primary dressing, general considerations in the after treatment, care of the wound, complications of wound infections, complications the result of antiseptics, of pressure, circulatory, operations upon special tissues, instruments and dressings commonly employed, etc. It will be found of immense help to the green surgical assistant in lightening his burdens, as well often to those better trained when up against a difficult proposition.

Ophthalmoscopic Diagnosis. Based On Typical Pictures of the Fundus of the Eye With Special Reference to the Needs of General Practitoners and Students. By C. Adam, Assistant at the Kgl. Univ-Augenklinik, Berlin. Translated by Matthias Lanckton Foster, M.D., Ophthalmic Surgeon to the New Rochelle Hospital; Member of the American Ophthalmological Society; Member of American Academy of Ophthalmology and Oto-Larynogology. With 86 Colored Pictures on 48 Plates and 18 Illustrations in the Text. 1913. Cloth, $6.00 net. New York. Rebman Company.

If this book had no features other than the excellency of its illustration, its existence would be justified. From the pictures alone the student or doctor could gain a good insight into the appearance of the normal and abnormal fundus. Added to this attraction, however, is the thoroughness with which the author delves into the diagnosis of the various eye affections demanding the use of the ophthalmoscope. A striking characteristic, and one which soon attracts attention is the assiduity with which the author directs attention to the interrelation between diseases of the eye and those of the general system. It will be found a most reliable and systematic guide to disease of the eye.

The Modern Hospital. Its Inspiration; Its Architecture; Its Equipment; Its Operation. By John Allen Hornsby, M.D., Secretary Hospital Section, American Medical Association; Member American Hospital Association, American Association for the Advancement of Science, and Association of Military Surgeons of the United States; First Lieutenant, Medical Reserve Corps, United States Army, and Richard E. Schmidt, Architect, Fellow American Institute of Architects. With 207 Illustrations. Philadelphia and London: W. B. Saunders Company. Baltimore: The Medical Standard Book Company. 1913.

In this book will be found a graphic account of the conduction, operation, and construction of a modern hospital. The introduction contains a full discussion of the proper management of the general hospital, the charity hospital, mixed hospitals, the private hospital, the financing of the hospital and the running

expenses. The section on hospital architecture goes thoroughly into the selection of the site, the planning, the area per patient, the arrangements of the administrative units, details of structure, divisions of a general hospital, equipment, etc.; that on operation into the selection of the board of trustees, the duties and responsibilities of the superintendent, of the medical staff, house staff, the operation of the various departments, etc. It is a book that should be thoroughly digested by those interested in the operation of a modern hospital, the visiting staff, the board of trustees, the superintendent and the house staff. The contents certainly encompass a model hospital, one of which, if only approached by our modern institutions, would be a model for the world. No hospital should be without a copy.

THE PHYSICIAN'S VISITING LIST. Sixty-third year of its publication. Sold by all booksellers and druggists. Philadelphia: P. Blakiston's Son & Co. $1.25. 1914.

Blakiston's Pocket Visiting List will be found as useful by the profession as formerly. It combines all of the good qualities of its predecessors and, as heretofore, contains much information of a useful character.

MALARIA: ETIOLOGY, PATHOLOGY, DIAGNOSIS, PROPHYLAXIS AND TREATMENT. By Graham E. Henson, M.D., Member American Medical Association, Florida Medical Association, Southern Medical Association, American Society of Tropical Medicine, Medical Reserve Corps, United States Army (Non-Active List). With an Introduction by Charles C. Bass, M.D., Professor of Experimental Medicine, Medical Department Tulane University, New Orleans. Twenty-seven **illustrations. St. Louis: C. V. Mosby Company.** 1913. Cloth, $2.50 net.

Our opinion of this book cannot be better summarized than by quoting from the introduction of Bass, an acknowledged authority in matters pertaining to tropical medicine, who says: "The appearance, therefore, of this work at this time is indeed fortunate. It is written for the general practitioner by a man whose experience and research in this disease for many years in one of the most intensely malarious sections of the United States enables him to view the subject from the most practical standpoint." We can add nothing to the above statement. It speaks for the work and is a sufficient recommendation of its value and merit. We have needed for some time a book of this character, and the reviewer feels certain it will fill the wants of the general practitioner. The lay of the book is that malaria is a preventable disease, and that it is a disgrace to the intelligence of the American people that they have permitted it to flourish so long after being in possession of the knowledge of its prevention. It also very thoroughly and excellently describes how to detect, diagnose and

treat the malady. The author lays especial emphasis on sanitary prevention and drugs other than quinine of use in its elimination.

Genito-Urinary Diagnosis and Therapy. For Urologists and General Practitioners. By Ernst Portner, M.D., Specialist for Urology, Berlin, Germany. Translated and edited by Bransford Lewis, M.D., B.Sc., Professor of Genito-Urinary Surgery, Medical Department of St. Louis University, St. Louis; Genito-Urinary Surgeon to St. John's Hospital and Frisco Hospital; Member of the American Urological Association, American Association of Genito-Urinary Surgeons, American Medical Association, etc. Forty-three illustrations. St. Louis: C. V. Mosby Company. 1913. Cloth, $2.50 net.

The booklet under consideration presents those subjects embraced under the category of genito-urinary diseases in an exceptionally attractive form for the general practitioner. It is concise, well balanced, those subjects being elaborated which experience shows the most important for the needs of the class of readers for which the book is intended, while the subjects necessary for a specialist are not touched at all or only briefly. It is full of useful information and suggestions, and while it is particularly adapted to the needs of the practitioner, it still contains many little hints which will be found valuable by the specialist. It is the first book on genito-urinary diseases that gives a complete account of the complement fixation test and treatment for gonorrhea. No medical library should be without it, and the doctor should not place it in an inaccessible place, but should keep it near at hand where he can pick it up whenever he has a few moments to spare. It is bound to become very popular, as it gives the doctor what he wants without wading through a mass of irrelevant matter.

A Clinical Manual of Mental Diseases. By Francis X. Dercum, M.D., Ph.D., Professor of Nervous and Mental Diseases, Jefferson Medical College, Philadelphia; Consulting Neurologist to the Philadelphia General Hospital; President of the Philadelphia Psychiatric Society; Ex-President of the American Neurological Association and of the Philadelphia Neurological Society; Foreign Corresponding Member of the Neurological Society of Paris and of the Neurological and Psychiatric Society of Vienna; Member of the Royal Medical Society of Budapest, etc. Philadelphia and London: W. B. Saunders Company. Baltimore: The Medical Standard Book Co. 1913.

This book meets a distinct need of the medical student. Books upon this subject have heretofore been too large as well as too fulsome for student purposes. The book under consideration avoids these errors, being sufficiently full without being skimpy,

and should meet the demands of the most exacting teacher. Dr. Dercum, through his years of teaching experience, is eminently well qualified to make a book combining the practical with a sufficiency of theoretical material to meet the peculiar needs of the student. We are pleased to state in the present volume he has done so. The classification of those diseases peculiar to the mental system, as well as their description and arrangement, is so simple, withal, so thorough, that no student who has arrived at the stage of his medical career in which mental disease is studied should find any difficulty in gaining a firm grasp of the subject. A striking feature of the book is the emphasis placed upon the treatment of psychiatric maladies. It is with much pleasure we recommend it to those who desire a reliable yet practical guide in their study of mental defects. Appropriate illustrations would have added both to its value and attractiveness; otherwise, it is a perfect example of book making.

Stammering and Cognate Defects of Speech. By C. S. Bluemel. Vol. I. The Psychology of Stammering. Vol. II. Contemporaneous Systems of Treating Stammering: Their Possibilities and Limitations. New York: G. E. Stechert & Co. Cloth, $5. 1913.

These volumes represent the labor of five years spent by the author in systematic investigation concerning the cause of stammering, as a result of which he arrived at the following conclusions:

The true theory of casuality must explain all the facts. It must explain the fact—

That the stammerer can usually sing without difficulty.

That the stammerer can often speak well when alone.

That the stammerer is usually fluent when speaking in concert with other people.

That the stammerer can usually repeat a word that he has eventually stammered out.

That consonants followed by short vowels are more difficult for the stammerer than consonants followed by long vowels.

That consonants at the end of a word never occasion difficulty.

That the stammerer may have difficulty on words that commence with vowels.

That the speech defect may assume the most diverse forms, being in one case passive and in another active and boisterous.

That one can stammer in thought as well as speech.

That there are more male than female stammerers.

That stammering is rarely acquired after the fifteenth year.

It is with this theory of casuality and the psychology of stammering that the first volume deals. In this book stammering is considered in its mental rather than physiological aspect. Bearing in mind the above conclusions, it looks like a rational method

of attack, and a close reading of the book as the author unfolds his reasoning will about convince the reader the theories are, at any rate, logical.

The second volume is devoted to a review and criticism of the various systems employed in treating stammering. The author specifically states that the systems cited in his review have not, as a rule, been given for their sovereign merit. Indeed, he says, many of the systems are devoid of merit, and have been recorded merely because they are the gold bricks that are daily sold to stammerers by an infamous fraternity of speech specialists. He maintains these systems, as well as all elocutionary systems, must become obsolute with the advancement of the psychological investigation of stammering.

THE PROBLEM. The Autobiography of a Physician. By Charles Percy, B.Sc., M.D. 12 mo., 128 pages, bound in cloth, gilt stamped. New York: Shakespeare Press. Price, $1 net, postpaid. 1913.

This is a work of fiction, by a surgeon, of peculiar interest to surgeons, physicians, and all who have studied the problem of life. It is written in the first person, and the narrator describes minutely an operation of most singular character, in which he removes the heart of a drowned patient, inserts an artificial heart, and keeps the head alive for days and days.

His investigations begin with studying the nature and cause of sleep, and some striking anecdotes of somnambulistic performances are told, also one of remarkable hibernation. Then he attacks the problem of life from an organic viewpoint, makes an artificial heart, and supplies it to a lizard, a turtle, a cat and a dog, all of which ultimately die. As a culmination of his experiments, the body of a newly drowned man, in which life is simply suspended, falls into his hands. Failing to resuscitate the patient, he tries the artificial heart, brings life into the head, and steals the body of the patient that he may have his companionship and use him for further experiments, causing the undertaker to bury some bags of sand in the casket sent for the remains. It is all very weird and very real. The science involved is accurate and up to date, and of absorbing interest from a surgical standpoint. The writer evidently chooses this method of exploiting some startling and unusual theories of his own—theories which he could not propound through the ordinary medical journal. His conclusions are daring and plausible, and sure to evoke discussion in the profession.

The popular view as to what life is undoubtedly is broadening. Who shall say where the line can be drawn between the mechanical part of the body and the soul?

Every student of life is certain to find the book of absorbing and striking interest.

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BALTIMORE, JANUARY, 1914

MEDICAL RESEARCH AND EDUCATION.

OWING to the far-reaching importance of the book, "Medical Research and Education," we have departed from our invariable custom of placing book notices under their proper designation and brought this notice under our editorial column in order to bring its contents more forcibly to the attention of our readers. The *Science Press* of New York has in this book brought together a series of articles upon various aspects of medical research and education by such eminent educational authorities as William H. Welch, Richard M. Pearce, Lewellys F. Barker, William T. Councilman, Franklin P. Mall, W. H. Howell, etc. We are accustomed to look upon the pioneer work of the medical fathers as partaking of scientific medicine. This is indeed a fact, but not in the sense as we know it today. Systematic medical research did not begin until the latter part of the nineteenth century, since which time every aspect of medicine has been rejuvenated by the efforts of men trained to produce results. Bacteriology, surgery, medicine, pathology, sanitation—in fact, all subdivisions of medicine have been made to feel the impress of self-sacrificing, hard-working, persevering, enthusiastic research workers, men such as James Carroll, who have dedicated their lives to medical advancement through systematic research work. It is with this aspect of medicine, one too often neglected, that the aforementioned book deals, to wit.: the development of laboratories for the medical sciences, present-day methods and problems, medical research in American universities (present facilities, needs and opportunities), the ex-

perimental methods (its influence on the teaching of medicine), medicine and the university, the relation of the hospital to medical education and research, certain ideals of medical education, the career of the investigator, experiences of a medical teacher, problems, methods and organization of research, with special reference to physiology, the addition of the fifth year to the medical curriculum, research foundations and their relation to medicine, and other subjects every whit as important and instructive.

Everybody interested in the continued advancement of the profession, be he teacher, research worker or the everyday hard-plodding general practitioner, cannot but read the contained articles without profit, education and illumination to him upon unthought-of avenues of development. It is a book which should be in the hands of every physician, not, however, to be stuck away in a covey hole, but read from cover to cover. Certainly one cannot read it without experiencing as never before a wholesome respect, admiration and pride in the accomplishments of our profession. The book should go a long way toward directing attention to the necessity of thorough preparation before one enters either upon the study of medicine or research work. It especially impresses upon the reader the immense amount of work which has been done by multitudes of workers to place medicine where it is today. It has not been the accomplishment of a day, but little attritions here and there which have kept the spark alive until some one with a better understanding or insight into the problem finally produced it in its finished form. Another feature is the advancement of ideas along which the profession should work in the future to still further elevate the medical profession. These suggestions are by men who have added their mite to medical knowledge—experts in their line. Therefore, one who has not had the benefit of their personal instruction can at least obtain from their article or articles, as the case may be, their plan of approach in investigating obscure problems, thereby saving much valuable time and avoiding unnecessary pitfalls. Pride in the accomplishment of our profession should, if for no other consideration, induce every doctor to possess the volume.

Medical Items.

Dr. William A. Fisher, Johns Hopkins Medical School, 1900, and Mrs. Fisher are occupying their town residence, 715 Park avenue, after spending the summer months at their country place at Ruxton.

After a two days' session at Johns Hopkins University, the National Academy of Science closed its meeting with a dinner at the Maryland Club, at which Dr. William H. Welch presided as toastmaster. Dr. Simon Flexner of New York City discussed the causes of infantile paralysis, the experiments made in isolating the germs of the disease and the effects of the virus on monkeys. Dr. Howard A. Kelly delivered an address on "Radium As a Cure for Cancer."

Dr. Curtis F. Burnham, Johns Hopkins Medical School, 1900, and Mrs. Burnham of 1418 Eutaw Place sailed for Europe November 19.

Academic Day was celebrated by the University of Maryland November 11, 1913.

At the annual banquet of the McDonogh School Alumni Association, held at the Rennert Hotel December 6, Dr. J. M. T. Finney, one of the trustees, was the principal speaker. He spoke of the advantage of the association to the school, and also told of the many improvements which are being made in connection with the institution.

Dr. Wilfred T. Grenfell, superintendent of the Labrador Medical Mission and best man at the Sayre-Wilson wedding, gave an illustrated lecture at the Belvedere Hotel November 27 before about 400 members of the Methodist Social Union. The pictures shown were ones he had taken of the wonderful country of Labrador and the surrounding ocean. While in the city Dr. Grenfell was the guest of Mr. and Mrs. Blanchard Randall at Catonsville.

Dr. John A. Tompkins, Jr., Johns Hopkins Medical School, '98, and Mrs. Tompkins, who recently returned from Buffalo, N. Y., where they have been living, are occupying an apartment at the Anneslie, 1203 N. Charles street.

Sir Rickman John Godlee, president of the Royal College of Surgeons, London, and honorary surgeon in ordinary to King George, and Lady Godlee, paid a recent visit to Baltimore. While in the city they were the guests of Dr. and Mrs. J. M. T. Finney. In addition to being a member of the British nobility and to holding an office of honor, Sir Rickman is one of England's most prominent surgeons. He came to this country to attend several medical congresses, and while here made a tour of inspection of American hospitals and clinics. He was especially interested in Johns Hopkins Hospital and Medical School. From Baltimore Sir Rickman and Lady Godlee went to New York, from which point they sailed for Europe.

Dr. Roades Fayerweather, Johns Hopkins Medical School, '03, announces the removal of his offices from 21 W. Franklin street to "The Buckler," 529 N. Charles street. His practice is limited to orthopedic surgery. Office hours, 2 to 5 P. M. (except Sundays) and by appointment.

Prof. Henry B. Fine of Princeton University is being discussed for president of the Johns Hopkins University. His election is being urged by President Wilson.

The woman's board of managers of the Franklin Square Hospital held a benefit performance December 4 of "Milestones" at the New Academy of Music. The money received will go toward the maintenance of the wards of the hospital in charge of the woman's board of managers.

Dr. H. Louis Stick, Physicians and Surgeons, '03, superintendent of the Worcester State Asylum for the Insane, paid a recent visit to Baltimore. While in the city he was the guest of his brother, Rev. J. Monroe Stick, of 12 E. 25th street. Dr. Stick was for seven years connected with the City Hospital of Baltimore.

Dr. and Mrs. Charles M. Franklin, who have been spending some time in Baltimore as the guests of friends, have returned to Lafayette, Ind.

Among the Baltimore doctors who participated in the seventh annual meeting of the Southern Medical Association, which met at Lexington, Ky., last month, were Drs. W. S. Thayer, Hugh H. Young, L. F. Barker, Joseph C. Bloodgood, David I. Macht, Thomas R. Boggs, W. Edward Magruder and H. O. Reik. Dr. Thayer is one of the councilors of the association.

Dr. John Charles Macgill, who has been spending the early fall at Atlantic City, N. J., has returned to his home at Catonsville, Md.

Dr. William Simon, professor of chemistry, College of Physicians and Surgeons, who has

From Great Britain, France, Germany, Holland, Sweden, Switzerland, Austria and the United States, eminent physicians and surgeons gathered in England, August, 1913, at the XVIIth meeting of

THE INTERNATIONAL CONGRESS OF MEDICINE

on which occasion

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been spending the summer with his family at Eaglesmere, Pa., has returned to the city and reopened his cottage on Edmondson avenue.

Dr. John R. Winslow, University of Maryland, '88, who has been spending some time in Maine and New Hampshire, has returned to his home, Wyncote Lodge, in Roland Park.

Dr. Nathan Ryno Smith, of 211 West Madison street, who has been motoring in the North, has returned to his country home in the Green Spring Valley.

Drs. John E. Legg and William L. Burns, both of Cumberland, Md., sailed recently for Europe.

Dr. Henry G. Branham, of 2200 Eutaw Place, who was recently operated on for intestinal trouble at the Franklin Square Hospital, is rapidly recovering.

Dr. Charles Fairbank Painter, Johns Hopkins University, class of 1891, has been appointed dean of the Medical School of Tufts College, at Medford, Mass., one of the largest medical schools in the country. Dr. Painter has been for the last seven years a professor of surgery at the school of which he now becomes dean. He is a member of a number of medical societies in this country and the editor-in-chief of the *American Association of Orthopedic Surgery*. The appointment of Dr. Painter reflects honor to his alma mater.

Dr. Arthur D. Hirschfelder, Johns Hopkins Medical School, 03, of 2245 Linden avenue, this city, the well-known heart specialist of Johns Hopkins Hospital, has accepted the appointment of professor of pharmacology and director of the department of pharmacology in the University of Minnesota at Minneapolis. Dr. Hirschfelder's many friends regret his decision.

BIRTHS.

Recently to Dr. John Staige Davis, Johns Hopkins Medical School, '99, and Mrs. Davis, of 1200 Cathedral street, a son.

MARRIAGES.

John Knox, Jr., M.D., University of Maryland Medical School, '06, of Lumberton, N. C., to Miss Mary McNamara of Baltimore, Md., at Baltimore, December 2, 1913.

Alva Adair Matthews, M.D., University of Maryland Medical School, '10, of Oak Hall, Va., to Miss Marie Williamson Houchings of Richmond, Va., at Bloxom, Va., December, 4, 1913.

Lewis Mines Allen, M.D., University of Maryland Medical School, '96, of Winchester, Va., formerly of Baltimore, Md., to Miss Dorothy Gilpin of Millwood, Va., at Millwood, December 10, 1913.

DEATHS.

Lindsay P. O'Neal, M.D., Washington University, Baltimore, '65, of Mechanicsburg, Pa., surgeon of volunteers during the Civil War; for several terms a member of the Common Council of Mechanicsburg, Pa., died at his home September 18, 1913, aged 74 years.

William B. Zineman, M.D., Baltimore University, '96, of Philadelphia, Pa., a well-known optician of Philadelphia, died after a lingering illness at his home October 15, 1913, aged 49 years.

Wilson A. Long, M.D., College of Physicians and Surgeons, Baltimore, '82, of Frederick, Md., a member of the Medical and Chirurgical Faculty of Maryland, died in St. Agnes' Hospital, Baltimore, November 7, 1913, from pneumonia.

Charles Lingham Cunningham, M.D. (license Maryland), a practitioner for more than 25 years, died at his home in Cresaptown, Md., October 22, 1913, from nephritis, aged 51 years.

Gurley Davis Moose, M.D., University of Maryland, '07, of Mount Pleasant, N. C., a Fellow of the American Medical Association, died from tuberculosis in a hospital in Asheville, N. C., November 7, 1913, aged 30 years.

William E. Miller, M.D., Physicians and Surgeons, '92, of 2239 Pennsylvania avenue, Baltimore, Md., died suddenly at his home November 23, 1913, aged 43 years.

Henry J. Evans, M.D., Hahnemann Medical College, Philadelphia, '81, of 1702 St. Paul street, Baltimore, Md., formerly president of the Maryland State Homeopathic Medical Society and of the State Board of Medical Examiners, died after a lingering illness at Hollidaysburg, Pa., November 30, 1913. For a while Dr. Evans was one of the consulting physicians of St. Luke's Hospital.

Oliver D. Simmons, M.D., Maryland Medical College, '06, Atlantic Medical College, Baltimore, '09, of Bowens, Md.; president of the Board of School Commissioners of Calvert county, died after a lingering illness at his home November 25, 1913, aged 42 years.

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REPORT OF THE CANCER CAMPAIGN COMMITTEE OF THE CLINICAL CONGRESS OF SURGEONS OF NORTH AMERICA.

Chicago, November 13, 1913.

So much has recently appeared in the press concerning the value of radium in the treatment of cancer that your committee has deemed it advisable to refer briefly to this subject before describing their activities during the past year.

Mr. Charles L. Parsons of the United States Bureau of Mines sums the matter up so well in his article, "Our Radium Resources," published in *Science*, October 31, 1913, that one can hardly do better than quote him verbatim:

"It is to be greatly regretted that, owing to the high price of the material, only three or four American surgeons have, so far as the Bureau of Mines is informed, been able to use it in quantities sufficient for the drawing of decisive conclusions. In the progress of the future applications of radium to the curing of disease, nothing is more to be feared than its use in nostrums of every kind. The 'wonders of radium' have been so extensively exploited in the public press that already the name is being employed as a psychological agent in advertisements of all kind of materials, many of which contain no radium at all, or, if this element is indeed present, in such small quantities that no therapeutic value can be expected. As bearing on the need of further experiment, attention is called to the fact that the concentrated action of large quantities of radium may effect cures that have been impossible with the smaller amounts heretofore available to the medical profession. It is doubtful if there is at the present time in the hands of the medical profession of America more than a single gram of this rare element, and the results of investigations, soon to be published, will show that the concentrated action

of the gamma rays from several hundred milligrams arrest certain forms of cancer and other malignant growths, when smaller quantities are without beneficial effect. It is highly important that the medical profession should also have some guarantee of the material they purchase, even if it is purchased in small quantities, and I am glad to note that the United States Bureau of Standards is preparing to standardize radium preparations."

From what Mr. Parsons says, it is clearly evident that the supply of radium in this country is as yet very limited, and that only three or four surgeons in the United States have had sufficient quantities of radium to enable them to satisfactorily test the efficacy of this mineral in the treatment of cancer.

In the hands of these surgeons the immediate effects on the cancer have in some instances been wonderful, the growth literally melting away in a few days. Some of these patients, it is true, have later succumbed to the disease, but others up to the present time have remained apparently well. Of course, these patients must be watched for at least one or two years more before it can be definitely stated that they are cured. Only time will tell what percentage of cancer cases can be cured with radium. In the meantime, the surgeons engaged in the study of radium strongly advise the employment of surgical means in all cases of cancer in which operation offers a satisfactory chance for a permanent cure.

This evening we are to hear from Professor Gauss what has been accomplished with mesothorium in the Freiberg Clinic.

At the New York meeting of this congress, held one year ago, it was clearly demonstrated that the laity had a very hazy idea of just what cancer is and how it can be most successfully combated.

The following facts were emphasized: During the last decade several earnest cancer campaigns had been waged. The main object of these had been to point out to the family physician what might be accomplished by early operation, and to urge him to send his patients to the surgeon at the earliest possible moment. Notwithstanding the splendid efforts in this direction, little had been accomplished, not because the physicians were necessarily negligent, but because the patients did not present themselves to the physician until the disease was far advanced. Hence it was finally realized that if satisfactory results were to be accomplished the message must be carried directly to the people. It was pointed out that 15 or 20 years ago it was very difficult to prevail upon persons with appendicitis to be operated upon; now, with the knowledge they have, after appendicitis has been diagnosed operation is sought at once, and the only question asked by the patient or his relatives is, "To what hospital shall I go?" Similarly, as soon as the laity are made fully aware of the cancer situation they will, on the first sign of the disease, present them-

selves for examination, and will gladly avail themselves of surgical aid.

The Clinical Congress, fully realizing the necessity for immediate action, gave the subject most careful consideration, and mainly through the efforts of its secretary, Dr. Franklin H. Martin, a committee consisting of Dr. E. C. Dudley of Chicago, Dr. C. Jeff Miller of New Orleans, Dr. F. F. Simpson of Pittsburgh, Dr. H. C. Taylor of New York and the speaker were appointed.

The committee was instructed to write, or have written, articles on the subject of cancer, and were further instructed to have these published in the daily press and weekly or monthly magazines, as might be deemed most expedient. Your committee has proceeded cautiously, and through the aid of that master organizer and medical editor, George H. Simmons, was able to enlist the co-operation and support of some of the most representative magazines in the country. Mr. Bok, editor, and Mr. Harriman, managing editor, of the *Ladies' Home Journal* manifested the deepest interest in the campaign. After much thought they came to the conclusion that a lay writer could better reach the public ear, and they naturally selected Mr. Samuel Hopkins Adams, who has proved himself such a dominant factor in the campaign against patent medicines, and who, in June of this year, was made an associate member of the American Medical Association in recognition of his splendid crusade. Mr. Adams, after visiting various surgical clinics throughout the country, wrote a most comprehensive article on the subject, which was first published in the *Ladies' Home Journal* for May, 1913. It is well worth a thorough perusal not only of every layman, but also by each member of the medical profession.

Collier's Weekly for April 26, 1913, and the May number of *McClure's Magazine* also contained admirable articles on the same subject from Mr. Adams' pen. The medical profession is under a deep debt of gratitude to Mr. Bok, Mr. Harriman, Mr. Collier and Mr. McClure for so freely opening their pages for the enlightenment of the public on this very important subject.

It has been estimated that these three articles reached a reading public of between eight and ten millions. *Harper's Weekly* for March 29 also contained a timely article urging cancer patients to be operated upon without delay. Abstracts from the magazine articles appeared in many of the daily papers throughout the country. The Baltimore *Sun* contained a full column, the Baltimore *News* and the Baltimore *American* each devoted ample space to the subject. The New Orleans *News-Item* gave a full abstract of Mr. Adams' article from *McClure's*, and the Detroit *News Tribune* for Sunday, April 27, 1913, with the permission of the *Ladies' Home Journal*, copied Mr. Adams' article in full. I have just mentioned a few of the daily papers that have given this matter wide publicity. The entire press of the country has been most liberal in its dissemination of our knowledge of can-

cer. Nor was this support confined to the papers of the United States. The Canadian journals have also strongly emphasized the necessity that sufferers from cancer should have the condition attended to promptly. I have splendid clippings from the daily press of London, Toronto, Montreal, St. John, N. B., Winnipeg and Vancouver.

Our committee wishes to express its deep sense of appreciation of the hearty support given us by the press in the dissemination of this knowledge, and we feel confident that they will gladly continue to publish any new data on the subject until every one on the Continent has a clear idea of just what cancer is, what its early symptoms are and how it can best be treated.

Our committee was particularly anxious to find out what influence Mr. Adams' articles had had on the community at large, and it was not long before data were forthcoming. Within a week after the appearance of Mr. Adams' publication, a colleague of mine told me that he had just operated upon a patient for cancer of the breast. The nodule was not larger than a pea, and when asked why she had come so early, the patient said she had just read the article in the *Ladies' Home Journal,* and felt that it was unwise for her to delay. The outlook in this case is excellent. Another colleague had for weeks been urging a patient with cancer to be operated on, but to no purpose. Within three days after the appearance of the article, which she had carefully read, she entered the hospital and was operated upon. Dr. C. Jeff Miller of New Orleans, one of our committee, wrote me that as a result of the article in the *Ladies' Home Journal* a lady soon came to him with an early cancer. Dr. T. C. Kennedy of Indianapolis, under date of May 13, 1913, writes: "A lady out in the State noticed a lump in the left breast. Seeing the article in the *Ladies' Home Journal,* she immediately consulted her family physician, who referred the case to me. I operated on her at St. Vincent's Hospital last Thursday, doing a Halsted. Here is a case that has a good chance of getting entirely well, as it was taken early."

Dr. Franklin H. Martin of Chicago early in May of this year saw a beginning carcinoma of the breast. The husband had just read the article in the *Ladies' Home Journal,* and insisted on his wife consulting a surgeon. Dr. Martin removed the entire breast and axillary glands, and feels sure that the outlook for a permanent cure is excellent.

It is evident, then, that the knowledge of cancer has already been widely disseminated, and it is bound to bear fruit. The more the subject is investigated, the clearer it becomes that if the women of the country are made aware of what can be done if cancer patients apply early for treatment, it will be unnecessary to pay much attention to the men. If men are sick, unless very ill, they pay no attention to it, and only after they are urged by their mothers, wives, sisters or daughters do they seek medical aid.

As a matter of act, the woman is the health guardian of the household.

The campaign of education has, however, in reality just begun. It will be necessary to enlighten every member of the community. The problem is a complex one—one that cannot be handled in the same manner that tuberculosis has been. The subject of tuberculosis is easy of explanation. The disease not only affects the individual, but is a real danger to those in the vicinity, consequently those in the neighborhood are continually on their guard, and if the patient be not careful in the mode of handling the sputa, this laxity is soon brought to his or her attention by those in danger.

Cancer, on the other hand, affects chiefly the patient, and is of little danger to those around. There is no danger signal, such as a cough, to draw attention to the malady. Of course, if the cancer be on the hand or face, it may be noted by others, but as a rule it is hidden, and the patient only is aware of its presence, and her friends do not for a moment suspect the true condition until the patient appeals for medical treatment; or, as is too often the case, she drifts along until the sallow cachectic appearance accompanying the late stages of the disease clearly demonstrates that the individual is suffering from some dangerous affection.

Much can be accomplished through carefully-written and authoritative articles in the daily press and in magazines; but this will not be enough; the symptoms of each and every form of cancer must be indelibly impressed upon every individual. For women such information can be most satisfactorily disseminated by women's clubs. These clubs have been rendering yeoman service to the country, and their real worth is only now receiving its due share of appreciation. The men of the community can be best reached through short lectures delivered in factories or in the clubs that they may be affiliated with. This heart-to-heart discussion of the subject before small companies of men and women is bound to yield results. If such an enlightenment is to be accomplished, the entire medical profession must take an active part in the dissemination of this knowledge.

In some cities the people are waking up to the fact that the public school buildings are at most used only about 35 hours a week. They furthermore appreciate the fact that if the maximum amount of good is to be accomplished, there must be concerted action. In wide-awake communities the schoolhouse has become the evening meeting place of the neighborhood. Here health talks and lectures on hygiene are given, and many other topics relating to the welfare of the community are discussed. This practical utilization of the public school building will undoubtedly soon be adopted in all parts of the country, and this avenue for the dissemination of the knowledge concerning cancer will then probably be the most important one.

The Clinical Congress entrusted our committee with the initia-

tion of this campaign. Your committee finds that accurate data on cancer in the United States are very meagre. If the people of the land are to be enlightened, we must keep better records.

The campaign entails added responsibility on the Clinical Congress of Surgeons of North America. With the increased number of cancer patients seeking surgical aid will come a large number of border-line cases—cases in which a careful microscopical examination of the growth must be undertaken to determine whether it is cancer or not. If the growth be malignant, operation is indicated at once. How many surgical clinics throughout the United States are prepared to make frozen sections at once and have at their command an expert surgical pathologist whose opinion can be obtained on the spot? Outside the main centres, few possess these facilities, and in many of the hospitals it is days before an expert opinion can be obtained.

Among the many good surgeons throughout the country, naturally only a few are surgical pathologists. The time is speedily coming when every hospital will have a trained expert surgical pathologist on its staff—a man whose advice can be had at every operation. He will prove to be one of the hospital's most valuable assets. Some may ask why we have not more such men. The truth is that the young physician must make a livelihood, and as the pathologist receives, as a rule, a mere pittance for his work, few have the scientific perseverance to enter this field. If the work was made satisfactorily remunerative, plenty of capable men could be induced to enter this field, and when they have once learned what a fascination there is in following an individual case to its very rock bottom, in obtaining here and there a clue enabling them to forecast with a degree of definiteness and precision whether this or that patient will recover, and in discovering every now and then something that has never before been known to medical men, the majority of these men will never give up the study of surgical pathology. But it is only fair that these pathologists should be well-paid. They are really the judges that pass sentence upon this or that patient. It is they who determine for the surgeon whether a radical operation is necessary or not.

It is the duty of this congress to see to it that in the near future every hospital has a well-trained surgical pathologist attached to its staff; otherwise, much of the value of your cancer campaign will be lost.

Your committee wishes to draw attention to the absolute necessity in every case of cancer of a thorough operation. To accomplish the maximum amount of good for the increased number that will come for operation as a result of our labors, our surgeons must be thoroughly conversant with the anatomy of the parts concerned, and must have a full knowledge of the paths along which the cancer travels from its point of origin. In cancer of the lip, for example, the operator must consider the removal of the glands of the neck; in cancer of the breast he must be familiar

with the lymp glands that are first involved; in cancer of the rectum he must remember that the liver is frequently secondarily invaded, and that, if such be the case, an extensive rectal operation is contraindicated.

On one occasion, while in Europe, meeting one of my Baltimore colleagues on the street, I said, "Why, I thought you were going to Dr. D——'s clinic this morning!" The reply was, "I did. He was to do a breast operation at 8.45; I arrived at 9, and the operation was over." This surgeon has a world-wide reputation. If our work is to be as superficial and incomplete as it was in this case, then it were better not to undertake any campaign against cancer. Fortunately for our patients, admirable work is being done in many clinics, but there are still exceptions.

After Results. Hospital management in years past has been notoriously lax, but in recent times business methods have been introduced into many of the newer institutions. It would do all medical men good to visit up-to-date business houses and see the card index systems and the various short-cut methods employed in every-day business. It would also be advisable for the trustees of the various hospitals to see to it that the same systematic and businesslike methods are used in the registration of data in the hospitals with which they are connected as they themselves employ in their individual businesses.

This is an age of time-saving devices, and all business men are keen to see what results have accrued from their endeavors along these lines. What applies to business applies equally well to the subject of cancer. What is the use of operating year after year in a routine manner, having but a hazy idea of the final outcome? At least one tactful clerk in every hospital should be assigned to the task of keeping in constant contact with patients who have been operated on. In this manner one can at a glance tell how many patients have been relieved by operation. The results of one operator can be compared with those of another—of course, in a fraternal, and not hypocritical, spirit, for there is no doubt that a runner can always make better progress with a pacemaker. The careful analysis of a large number of cases will always demonstrate wherein future improvements can be made; moreover, this strong evidence of the hospital's interest in their welfare cannot fail to impress its former patients, and will stimulate them to urge their fellow-sufferers to undergo a similar treatment.

These data, to be of use, must from time to time be thoroughly analyzed and published. Follow up all your cancer patients; see what has become of them. Many of them will be dead, but some that you have lost track of are still living and well. You will soon become so interested in the return letters that you can hardly wait for the postman to arrive, and when now and then a reply says that the patient is alive and well at the end of 10 or 13 years, it will warm the cockles of your heart; it will more than outweigh

many of the disappointing results you have had, and will make you feel that, after all, the fight is well worth keeping up.

With the increased number of cancer patients coming early for operation, the percentage of cures will naturally be increased, and with the improved methods of operating this percentage will be still further improved. It is this continual increase in the number of permanent cures that we must keep continually before the public.

Many of the smaller hospitals have difficulty in making ends meet. Such institutions will not be able to furnish funds for the collection of the necessary data on cancer. A cancer fund could not be put to better use than in paying the salaries of young, capable physicians who would carefully analyze the cancer results of the smaller institutions. If all statistics could be utilized, in a few years the cancer committee would have an abundant and really valuable amount of information on the subject.

Whether the etiology of cancer will soon be discovered or not is problematical, but in any event the people of the country should be made thoroughly cognizant of the early symptoms of cancer, and of the fact that many may be cured by early operation. I can imagine no gift that would yield the philanthropist a greater return than the satisfaction of knowing that as a result of his munificence thousands of lives of cancer patients had been saved by prompt operation.

New workers in an old field are often prone to forget the fundamental labors of pioneers in the same field, and we should be remiss did we not express our appreciation of the labor of those who in the past have done so much to bring before the general public a judicious amount of knowledge upon the subject of cancer. Your committee would also draw attention to the splendid work of the Council of the American Medical Association, under the chairmanship of Dr. H. B. Favill, about which Dr. Green will tell us something this evening.

In a few words let me give you the message of the cancer committee of the Clinical Congress to the people of America:

Cancer is a very common malady.

In the beginning, it is a strictly local process, and not a blood disease.

It is easily cured when removed early in its course.

It is incurable in its later stages.

It is no respecter of race, creed or social distinction.

It is the common enemy of all mankind.

Earnest-thinking people in all walks of life must combine to make a determined fight against this relentless foe.

Dr. Thomas S. Cullen, *Chairman;*
Dr. E. C. Dudley,
Dr. C. Jeff Miller,
Dr. F. F. Simpson,
Dr. H. C. Taylor.

COMPULSORY STERILIZATION AND SEGREGATION OF THE MENTAL DEFECTIVE.

By H. M. Carey, M.D.

Mr. Chairman and Gentlemen:

There is no problem of today any more important to the Government, the medical profession or the public at large than this. The poet's statement,

> "Ill fares the land to hastening ills a prey
> Where wealth accumulates and men decay,"

is surely applicable to this question. I take it that reference is made not to the actual decay of mortal flesh of the individual man, but to the decay of the human race, and if ever any country faced this particular problem at any period of its history, our country is facing it today. I grant you that the solution of this problem will not create a Utopia, but with its solution must come the solution of other problems bearing upon the institutions of our race in its pre-eminent mastery of all things.

Further,

> "To thine own self be true, and it must follow, as the night the day, thou canst not then be false to any man."

each individual owes it to himself to take such steps as are necessary to protect his own posterity. Hence the reason for the toil, the trial, the tribulations of the enlightened members of the human race who are striving, in their brief span of life, to lay aside enough of this world's goods that their children and their children's children may reap the benefits thereof. For this reason exist the large corporations, the vast amount of money invested in insurance. What benefit is to be derived from all this struggle if the individual for whom the struggle is made is mentally defective, owing to a lack of care in the mating of his parents? In an Eastern institution there is today an individual who has been endowed with an unlimited amount of worldly goods, and yet, through a heredity taint, he is deprived of his liberty, is costing the State thousands of dollars, besmirching the lives of honest men, and but for the fact of a crime committed, owing to this mental defect, he would be at large to transmit his taints to posterity through the coming generations.

There is not a single field of thought interesting the students of the day with which this question of the mental defective is not intimately interwoven—"Hours of Labor for Women and Children," "The Health and Sanitation of Working Places," "The School and Education Problem in General," the courts, petty criminals, jails, almshouses, insane asylums, reformatories, better

housing conditions and the so-called "White Slave Traffic" are all closely related to this problem.

We are all familiar, to a more or less extent, with the Mendelian law, and we have heard of "Recessives" and "Dominants" until we have grown weary in listening. Each individual treating on the subject evolves a new, fine-spun theory replete with more or less euphonious terms, but the facts still remain that the defective is here; that he is increasing, and with much more rapidity than the normal individual, and it is my purpose mainly to show the enormity of the problem, and what might be expected as a result of its proper solution at this time—to interest Mr. and Mrs. Common People in this subject, as they are not awakened to its enormity, and, when they are awakened, the cry for the proper treatment of these individuals will sweep from the coast of Maine to that of California, and from the Great Lakes to the Gulf of Mexico in an overwhelming wave. Those of us who are particularly interested in this problem at this time do not expect to solve it through any personal effort, as the task is too colossal to be undertaken by individual effort. What we do hope to accomplish, however, is this awakening of the people en masse and to follow the celebrated edict of Daniel O'Connell—"Agitate! Agitate!"

Glittering generalities are surely devoid of facts, consequently I shall quote concrete examples.

The report of the special committee on the "Prevention of Feeble-Mindedness" in New York State, which was most carefully prepared after long investigation, states that there is at least one mental defective individual to every 300 of the general population. This is a most conservative estimate. The report also states that the ratio is increasing rapidly.

In the State of Indiana a study made in connection with 511 families, in which there were known to be mental defectives, yielded the following figures:

Total number of persons in 511 families	1,924
Supported in public institutions	1,334
Feeble-minded	1,249
Insane	54
Otherwise defective	44
Illegitimate	267
One or both parents defective	1,024

In the State of Pennsylvania at this time there are from 15,000 to 18,000 defective individuals who are not receiving care and attention. Some few years ago they constituted but a small percentage of the population. Today this has increased, particularly due to the fact that we are better able to recognize the condition, but more particularly due to the fact that no restriction has been placed upon them and that they have been allowed to multiply, both within and without the bonds of matrimony.

Kindly bear in mind that this condition is a defect, not a disease. It is largely hereditary; it is incurable; it is increasing. It is costing the community more each year, and this cost continues to increase directly in proportion to the number of individuals. Also bear in mind the fact that once defective, always defective. Environmental conditions may be changed, the individual can be properly cared for. He is happier and better, but he is not cured. That the condition is hereditary goes without question.

First—J. O.; father's grandfather an individual of the "Barnaby Rudge" type—the village fool. Who has not seen numbers of this type? Father's father—feeble-minded. Father—owing to the fact that his father married into a family of considerable mental ability—is a high-grade imbecile. This case—J. O. is a lower grade imbecile than any of the others in the strain. Father was raised in an institution in the West. At the age of 20 he was given $25 and told to depart and make his way in the world. This feeble-minded boy is the result. Fortunately the strain is liable to be limited to this one child, and yet it is impossible to tell the untold number of feeble-minded and otherwise mentally defective individuals who may spring from this one person if not properly cared for.

Second—A most beautiful example of mental deficiency. This case is costing the State today $1700 for the care and maintenance of those individuals who are receiving institutional care, and yet who can tell just how much this family is costing the community, aside from institutional care? How many fires have been started by this family? How much time and attention have been devoted to it by the charitable organizations? How much effort is being practically wasted in order to keep this family up to the plane of the average daily individual?

Your attention is called to the fact that the condition is manifestly more grave in each generation. The condition is not only hereditary, but the offspring of every mentally defective individual is himself or herself defective. Given the mating of two such mentally defective individuals, and every single individual member of the offspring will be mentally defective and of a lower grade than the parents. In proof of the fact that the condition is increasing one has but to look at the family tree of any of these particular groups. How many families are found in the better walks of life who have more than one or two children? How many of this particular class with less than 6—up to 12 and even up to 20?

Again, why should these individuals be segregated? If for no other reason than the selfish one of self-preservation, or, if you wish to place it on a more lofty plane, the preservation of the human race.

Again, these individuals should be segregated because it is exceedingly expensive in time, effort and money not to segregate them. One has but to point to the appalling record of the mental defective in connection with the petty crimes. The large per-

centage of the petty crimes, not only in the large cities, but in the rural communities, are committed by this class. I have a concrete example in mind of an individual who spent the greater part of his life within a few miles of a public institution, who was known to be mentally defective for years, conceived some fancied wrong done him by a family that had been most kind to him, and after having been denied admission to the household, owing to some improper advances made to a young member of the family, returned in the dead of night, set fire to the buildings, destroying from $12,000 to $15,000 worth of property, jeopardized the lives of the family, and is still at large.

This large percentage of criminal cases is due to the fact that we have either not recognized our responsibilities or have hidden our heads as the ostrich and refused to acknowledge existing conditions. Those of us who have not awakened to our responsibilities are not blameless, but how much to be censured is he who scoffs at the idea and blatantly proclaims that the problem of feeblemindedness is only a myth and states that nature's laws will work out our salvation? Have your beautiful buildings, your magnificent boulevards, your colossal business enterprises arisen from copying the worst examples set before you? Improvement is the order of the age and must be applied to the human race as well as its endeavors. These individuals should be segregated from the fact that it is not right or just to compel them to take their place in the struggle for daily existence in the every-day world. The community should provide these individuals with care not only for their physical and bodily wants, but with protection from the aggression of their more fortunate fellows. Is it right or proper for these individuals to be allowed to roam at large, the tool of unscrupulous persons? To force them into sweat shops to work for a mere pittance?

So much for the enormity of the problem. What is its solution?

First, every case of mental defect should be reported, as it is just as important, even more so, to report these individuals as it is to report smallpox, scarlet fever, diphtheria and a host of other ills to which human flesh is heir. The individual should, at the age of six, be placed in an institution for a period of observation from six months to a year. Proved a mental defective, the individual should be segregated in the proper institution for life with this proviso, that at the age of 20, if the families can prove that they are in position to properly care for the individual, he or she may be removed, provided, first, that the operation for the prevention of procreation shall be performed.

Along with this we must have proper marriage laws—not only have them, but enforce them. Every individual applying for a marriage license should be compelled to produce evidence of physical, mental and moral health. Personally, I am not in favor

of compulsory sterilization as advocated by a large number of individuals today. The great harm to future generations will not come from those individuals who are segregated, and the program of sterilization as advocated is wrong from the fact that it considers only those individuals in institutions. Further than this, the State owes it to its citizens to provide some means not so radical as compulsory sterilization and must provide care for this type. After this care is provided sterilization should be used only after careful thought and consideration of the particular case and should be fitted to the individual as is any other operation performed for the relief of existing conditions.

The program as outlined would be lengthy and expensive, but not nearly as expensive as to continue our present methods. In our State an outlay of $25,000,000 would solve the problem effectually—a colossal amount, and yet, with all the money spent today for good roads, good capitols, jails, almhouses, an outlay of this amount for good citizens is surely justifiable.

"Men of victorious cities, aglow with the heat of strife;
Men of the bountiful country, alert and throbbing with life;
Fathers of bright-eyed daughters, mothers of stalwart sons,
Hark to the host of the vanquished, marching with lowered guns.
For we are the army of Sorrow, living, yet worse than dead;
Saddest of all God's creatures, from whom His light has fled.
The guilt of the mighty cities has doubled our teaming ranks,
But many a sun-lit valley sends stragglers at our flanks.
From village and town and prairies, o'er the length and breadth of our land,
Are gathered the thousands on thousands who make up our pitiful band.
O God, can you leave us longer, us who are guiltless of sin,
Or rest for a single moment till each lost sheep is within?
Gray-haired, yet catching at sunbeams; of age, yet playing with toys;
You house us with tramps and drunkards, grown men and man-grown boys.
Lured by each wayward impulse, bereft of the power of control,
Yet placed in a world of demons, ready to snatch at our soul.
O sisters, think of us women, children in innocence,
Yet mothers of fatherless babes, victims of foul offense.
Oh, the pangs that we must suffer, the anguish at their birth,
Hunted and mocked and branded, the outcasts of the earth.
Saved only the bitter knowledge, that by an iron law
Our children and their children must carry the self-same flaw.
Oh, brothers, who hold the purse strings in each of the kindred States,
Who vote vast sums for highways and locking of the gates,
If you laid the wealth of the nation in payment at our feet,
The debt of our lost mahnood you would still fail to meet.
Yet now but a handful of us are guarded with zealous care,
While the rest, like a festering ulcer, on our country's breast lie bare.
If Love and fleet-foot Pity knock vainly at your door,
Shall fear and worldly wisdom not spur you on the more?"

LOCAL ANESTHESIA (QUININE AND UREA) IN THE TREATMENT OF RECTAL NEUROSIS AND OFFICE OPERATIONS.

By J. Dawson Reeder, M.D.,
Baltimore, Md.

Rectal neurosis is a topic rarely discussed by medical men, and the cases here presented have caused no little work and study, to say nothing of the embarrassment, for two specific reasons—first, my inability to discover any pathological lesion upon repeated examinations which were most searching in character, and second, because I had to finally class it among the so-called neurasthenic group with an apology upon my part, as I have always felt that neurasthenia was a wastebasket for undiagnosed conditions and a very poor excuse to offer when called in consultation. Gant calls attention to a series of cases classified under neuralgia and hyperesthesia, and gives as the exciting causes pressure irritation or functional of a nerve or its center. Constipation and fecal impaction are causative factors for two reasons—(a) pressure on nerves by fecal mass, (b) multiplicity of microorganisms which cause putrefaction, acting directly on nerve endings (fecal toxemia).

The case of Mr. X is of special interest, because I have exhausted every means at hand to place the cause, and am compelled to admit my failure to do so. This patient was referred to me by Prof. Hugh H. Young January 20, 1913, for a continual throbbing, aching pain in lower part of rectum, increasing hourly every day until by evening he was very miserable.

Proctoscopic examination showed a mild proctitis, which promptly cleared up under warm permanganate irrigations, followed by a spray of cold water, and after several visits rectum appeared perfectly normal, but he still complained of the throbbing, aching pains. Sphincter was dilated under local anesthesia, and anus was so completely anesthetized by quinine and urea that I repeatedly punctured with the hypodermic needle, drawing blood at various points around muco-cutaneous border without the patient feeling the sticking of the needle at all.

Upon his next visit, 24 hours later, the parts were still anesthetized as I repeated the sticking of the needle, yet he had not been free of the throbbing a single moment since the day before, and at that time was suffering intensely. Having exhausted every effort of solution of this strange condition and finding no literature in my own library relative to this case, I reviewed the collection in the Medical and Chirurgical library, and could find but one solution, in a paper by Tuttle in 1908, in which he had observed the same condition in a case of beginning tabies dorsalis

many months before any other sign had presented itself. With this small amount of information, I was compelled to report to Dr. Young my inability to find any cause for the condition, and suggested that he be watched for beginning tabies. My last report from him was to the effect that he still had these pains, beginning about the middle of the day and getting worse toward night, which made him feel incapacitated for any social engagements, and was contented to remain at home most of the time. I would prefer to watch this case for further developments than to make a diagnosis of neurasthenia.

In reviewing the literature upon this subject we find symptoms simulating neuralgia frequently induced by fissures, ulcerations, hemorrhoids and foreign bodies, as well as certain affections of the bladder, urethra, prostate, ovaries, coccyx and sacrum, in which the pain is reflected to the rectum. In such cases a diagnosis can only be made by exclusion, after a most searching and painstaking examination. Neuralgia is more frequently confused with coccygodinia than any other affection in this region. In the latter, however, there is always a history of direct injury to the coccyx.

Prognosis should be guarded in rectal neuralgia, because in most cases the pain will recur from time to time, until the patient becomes perfectly exhausted. "Sometimes the disease seems to run its course and disappear spontaneously."—Gant.

Pruritus Ani. Notwithstanding all that has been written as to the etiology and treatment of this condition, I desire to call attention to a case which was successfully treated by injection method carried out on the principle of the Ball operation by separating the terminal nerve endings from the cutaneous covering which was irritating by numerous areas of ulcerations induced by scratching.

G. W. E.; B. & O. R. R., Signal Department; referred by Dr. Page Edmonds.—Had been suffering of pruritis ani for a period of two years; had several minor operations upon the rectum for hypertrophed anal papilla and ulcerations. Has never had venereal disease; no T. B. or cancer history. Examination reveals large area of eczema extending for several inches around the anus, and speculum shows small submucous fistula extending from the mucocutaneous border for about two inches, which opens into the rectum. No attempt was made at first to close the fistula, until the eczematous and infected skin could be improved. The entire area of ulceration was raised upon a water bed of quinine and urea ½ per cent. solution, and after complete anesthesia was obtained, this area was painted over with 10 per cent. silver nitrate solution, followed by tinct. iodine, until the parts were a dark ebony color; a small pledget of cotton was then placed between the buttocks and patient instructed to return the next day. Following day he returned and was completely anesthetized, and area was showing evidences of exfoliation. Parts

were then dressed with stereate of zinc, and he was instructed to return in about three or four days. Upon the following visit I was surprised to find the parts still insensible to the pricking of the needle, and made another application of iodine after washing the rectum out with potassium permanganate 1-6000 lukewarm.

At the end of the week the cutaneous eruption had greatly improved, and the new skin showed deep white scars where the deep skin had been torn away by the finger nails while scratching. Deep injection was then made with same strength of quinine solution into the nerves for complete anesthesia, and after waiting about 20 minutes dilated sphincter for operating; probe was introduced from within outward upon the buttocks and fistulous track was laid open, curetted, touched up with iodine and packed with iodoform gauze. Anesthesia again lasted sufficiently long to remove the dressings the next day without any pain whatsoever, and wound was then allowed to granulate. At the end of about one month patient had completely recovered, and has had no return of pruritis and area of indurated skin with scars had completely exfoliated, leaving perfectly healthy smooth area.

While I have been using quinine solution for past two years almost exclusively for office work, this is the longest period of anesthesia that I have had occasion to observe. While I have opened and removed clots from thrombotic hemorrhoids and used ½ per cent. solution frequently in incising or excising fissures and dressed the cases the next day with no pain or patient only feeling the manipulations, I have not had them visit the office sufficiently often to know just how long anesthesia lasted, although great claims are made for this drug by enthusiasts.

While there has been some antagonism on the part of operators who have used quinine with unfavorable results, I have not had a single infection or hemorrhage following. In each case I use a new solution, throwing away what is left over after each operation, and make my solution by dissolving tablet in desired quantity of water and boiling in a test tube over a Bunsen burner. Realizing that infection may be introduced by dissolving tablet in sterile water without further boiling, I find the large test tube answers the purpose desired, and while it is claimed that solutions over 1 per cent. have produced capillary oozing or slough, I cannot discuss this matter, as I have never had occasion to use stronger solution.

As to the toxic qualities of quinine, even in persons who have an idiosyncrasy for the drug, the amount is so small when we recall the fact that it has not been so many years ago when it was used hypodermically in 10 grain doses in congestive chills and other forms of malarial infections.

Local Anesthesia. The dangers, inconvenience and necessary confinement, as well as detention from business which is demanded in the use of general anesthesia in many minor operations, has created a demand and constant enlargement of the field for

this class of work in surgery, and especially is this so in diseases of the rectum and anus.

While I have never attempted any big operation or one which will require more than a few minutes under regional anesthesia, I feel that our present knowledge of its use has placed at least two-thirds of the affections of this region amenable.

While I still believe that hemorrhoids (except external and thrombotic) are best operated upon under general anesthesia, there are any number of operators who now use the local method almost exclusively. As I recall the advice of Dr. Tiffany—to always do the operation that you know how to do the best if you want results—and being student, also assistant, for a period under the late Dr. Tuttle, I feel that I can give my patient better results under all conditions with clamp and cautery. As to the various agents used in local anesthesia, perhaps those in greatest favor today are ethyl chloride, cocaine, beta eucaine hydrochlorate and lactate, alypin, stovain, novocaine, chloretone, quinine bimuriate and urea and sterile water. Formerly cocaine in solutions varying in strength from 4 to 10 per cent. were used. Symptoms of an alarming nature developed from a few drops, which demonstrated its toxic properties and dangers in strong solutions. To-day we know that the extent of anesthesia produced for operative work depends not so much upon the strength of the solution, but upon the amount of pressure produced upon the nerve endings by quantity of solution introduced.

I have witnessed Professor Bodine in the New York Polyclinic Hospital repeatedly do an appendectomy or herniotomy by nerve blocking of ilio inguinal and ilio hypogastric with solutions which were practically sterile water. The strength of the solution varies with the part to be anesthetized, as well as the amount of work to be done. While local anesthesia is admirable for office work—and its field is broadening every day—in rectal diseases it is my judgment only safe in conditions in immediate contact with the anal canal. No ulceration or hemorrhoid should be treated until a very thorough and searching examination has been made of the rectum and sigmoid, as it would be a sad discovery after a period of treatment that the anal condition for which you have operated or treated is only secondary to an ulceration, stricture or malignant condition higher up in the rectum.

Patients suffering from anemia are always bad subjects for operations at one's office under local anesthesia, and a history of hemophilia should always be excluded. Persons of highly nervous temperament and hysterical females are best operated upon at home or in hospital, and then under general anesthetic.

Another application of quinine and urea which has served me well is the injection of the fluid direct into the rectum with a small glass syringe for examinations with instruments. I have repeatedly injected this drug into the bowel about an hour before introducing the sigmoidoscope, and the patients have complained

but very little of its manipulations, and the sphincter has certainly been quieted to a very marked and pleasing degree.

Before operating upon fissures, fistulae and hemorrhoids in the office, one will find it very helpful to insert a small plug of cotton or gauze saturated with the solution into the rectum above the field of operation as the first step in his technique, and will find that it will assist in a marked degree in reducing the amount of pain which the primary introduction of the needle would otherwise produce.

304 Professional Building, Baltimore, Md.

Book Reviews.

GONORRHEA IN WOMEN. Its Pathology, Symptomatology, Diagnosis and Treatment; Together With a Review of the Rare Varieties Which Occur in Men, Women and Children. By Charles C. Norris, M.D., Instructor in Gynecology, University of Pennsylvania; Assistant Gynecologist to the Hospital of the University of Pennsylvania; Physician to the Maternity Hospital, Philadelphia. With an Introduticon by John G. Clark, M. D., Professor of Gynecology, University of Pennsylvania; Gynecologist-in-Chief to the Hospital of the University of Pennsylvania. Illustrated by Dorothy Peters. Philadelphia and London: W. B. Saunders Company. Baltimore: The Medical Standard Book Company. 1913.

Gonorrhea in women is capable of playing such havoc with not only the genito-urinary tract, but also with other structures that a complete exposition of the malady by one capable of drawing conclusions through a thorough experience by actual contact with the several conditons arising from the Neisserian infection is indeed a happy event. The volume before us is not only thorough to the least detail, but exceedingly comprehensive. Moreover, the author tells his conclusions in a lucid, clear, authoritative and interesting way. It is indeed an instructive work. In an interesting vein the author takes us back historically to the very earliest records of the disease. He also spends some time in describing the views held by the profession at various times concerning the nature of the affection. No aspect of gonorrhoea is passed over by the author—historical, bacteriological, pathological, sociological therapeutical. From his vast experience he is capable of and does enter into the various lesions, both local and general, which occur during an attack, viz.: of the skin, lungs, osseous and circulatory systems, bladder, glands of the gastro-intestinal, ophthalmological, rhinological, neurological and other tracts. In the chapter on sociology the author enters into the consideration of gonorrhea as a cause of sterility and abortion, the high place it occupies in blindness of the newly born and the havoc it is capable of playing

not only upon the health of the infected person, but also its bad influence upon the body politic. In the chapter on bacteriology he gives the latest and best cultural methods, the most reliable staining technic and a pathological discussion of the lesions upon the system, pelvic and general.

Throughout the work he emphasizes again and again the importance of educating the public to the infectious nature of the disease. He strongly advocates the handling of gonorrhea as any other infectious disease, *i. e.*, by isolation in a contagious hospital, or at home under proper supervision, so that the trouble cannot be spread widecast throughout the community. The reviewer is of the same opinion. One function of a State is the protection of its subjects, not only from other people, but also from contagious diseases. In such a disease as gonorrhea, which is capable of producing untold misery and unhappiness, besides civic demoralization, surely for its own protection the State should step in and endeavor to prevent its spread by proper isolation measures. There is no more reason for secrecy in venereal infections than in non-venereal, and we believe through such efforts as Norris' it is only a matter of a short time before the State will recognize this duty to its citizens. Along this line he outlines a scheme by which the prevalency can be controlled. In describing the pathological lesions the writer starts with those affecting the external genitalia, then on through the generative tract. Due consideration is given to treatment, both medicinal and surgical. We are firmly convinced that a careful study of its contents by those interested in gonorrhea from a clinical standpoint will satisfy the most exacting that the author has produced a book worth while; that he has handled his subject in a most satisfactory manner; that he has made a book which is highly instructive and which ought to exert a specific influence in lessening the frequency of gonorrhea, thereby performing a distinct service to mankind as a whole.

Diet in Health and Disease. By Julius Friedenwald, M.D., Professor of Gastro-Enterology in the College of Physicians and Surgeons, Baltimore, and John Ruhrah, M.D., Professor of Diseases of Children in the College of Physicians and Surgeons, Baltimore. Fourth Edition, Thoroughly Revised and Enlarged. Philadelphia and London: W. B. Saunders Company. Baltimore: The Medical Standard Book Company. 1913.

If the other editions have been found useful in the combating of diseases of metabolism, after a careful weighing of the contents, we predict a greater usefulness for the present edition than that enjoyed by any of its predecessors. That it has met a distinct need of the profession is attested by the rapidity with which each succeeding edition becomes exhausted. There should be no

exception in the case of the present edition. Every doctor has at last come to realize that many obscure maladies are due to errors in metabolism. In brief, the profession has come to look upon proper feeding as the avenue of escape for individuals suffering with ill-defined ailments which have successfully withstood internal medication. The merest tyro in the profession now admits that in kidney affections proper feeding is of more importance than all medication. Of course, as in other lines of medicine, entire reliance must not be placed in it alone. However, of late, so many additions have been made to our knowledge of diet that many opinions believed true a few years ago are now known to be erroneous. These additions have necessitated practically an entire recasting of the book, which changes bring the contents up-to-date. The sections on salt, diet in fevers, gout, diabetes and infant feeding have been entirely rewritten, as well as the section on the physiology of digestion. Many new tables which will be found very useful to those engaged in modern feeding methods, have been incorporated in the text. As time goes on more and more attention will be paid to dietetics by medical schools, and until these institutions thoroughly realize the importance of the subject physicans and students will have to have recourse to such books as the one before us for the desired information.

The contents include discussions on the chemistry and physiology of digestion, classes of food, beverages and stimulants, infant feeding diet in disease, the dietetic management of surgical cases, dietaries in public institutions, rapid reference diet lists, etc. As heretofore, the book will be found to cover its field very efficiently, and a good reference book to have at hand.

Genito-Urinary Diseases and Syphilis. By Edgar G. Ballenger, M.D., Adjunct Clinical Professor of Genito-Urinary Diseases, Atlanta Medical College; Editor Journal-Record of Medicine; Urologist to Westley Memorial Hospital; Genito-Urinary Surgeon to Davis-Fisher Sanatorium; Urologist to Hospital for Nervous Diseases, etc., Atlanta, Ga., Assisted by Omar F. Elder, M.D. The Wassermann Reaction by Edgar Paullin, M.D. Second Edition, Revised. 527 Pages, with 109 Illustrations and 5 Colored Plates. Price $5 net. E. W. Allen & Co., Atlanta, Ga.

Ballenger's book on Genito-Urinary Diseases and Syphilis has been so recast that one can easily imagine he is reading an entirely new book. Like its predecessor, it is eminently practical, being written with the needs of the general practitioner in view. From cover to cover it contains a wealth of helpful suggestions, hints that can be put into actual use. It is written in a pleasing style and covers the field both practical and theoretical sufficiently full for all practical purposes. Its only shortcoming is the lack of

original illustrations, which we believe the author could have and should have supplied from his own voluminous material rather than borrowing from other sources. It is exceptionally well balanced for a book of its size, those subjects which are most common being given the major attention, those least so less space. For student and general practitioner purposes it is a book of real merit, absolutely accurate both in diagnosis and treatment, and above all, sufficiently full without being bulksome. It gives us great pleasure to put our stamp of approbation as well as hearty recommendation upon the effort of Dr. Ballenger and his co-laborers, and congratulate them upon making such a helpful contribution to genito-urinary literature.

Causes and Cures of Crime. By Thomas Speed Mosby. Member of the American Bar; Former Pardon Attorney of the State of Missouri; Member American Institute of Criminal Law and Criminology. Author of "Capital Punishment," "Youthful Criminals," "Alcoholism and Crime," "Mothers of Bad Boys," and other essays. Illustrated. St. Louis: C. V. Mosby Company. Cloth, $2 net. 1913.

The author has the right idea concerning crime, namely, that it is the result of a diseased mind. He maintains that a criminal is not incarcerated as a punishment, but for instruction in the right way of living. He is firmly convinced that the hospital is the proper institution for the first offense rather than the penitentiary. From the contents one easily gleans that the writer stands for every reasonable prison reform and the elevation of the self-respect of the criminal rather than his degradation. The book is essentially an essay on the new penology, and represents the views of those penologists throughout the country engaged in evolving a new penology along the lines of seeking out a cause for the crime, its treatment and cure, if possible; to wit., crime is the outcome of a diseased mind.

Anatomy and Dissector in Abstract. By Stewart L. McCurdy, A.M., M.D., Author of Oral Surgery, Orthopedic Surgery, Medical and Surgical Emergencies, Bone and Joint Surgery; Professor of Anatomy and Surgery (Dental Department), University of Pittsburgh; Orthopedic Surgeon Presbyterian and Columbia Hospitals; Surgeon P. C. C. and St. L. Railway; Member American Medical, American Orthopedic, Pennsylvania State Societies, Pittsburgh, Pa. Fourth Edition. Pittsburgh: Medical Abstract Publishing Company. 1913.

As a quick reference book for preparation for examination this book meets a distinct need of the student. It will also be found useful in the dissecting and class rooms when used in conjunction with the larger books.

Maryland Medical Journal

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BALTIMORE, FEBRUARY, 1914

DR. HUNNER WINS.

A decision of great importance to the medical profession of Maryland, in fact epochal, was handed down by the Maryland Court of Appeals in the celebrated Stevenson case, in which the lower court last March had affixed damages at $1000 against Dr. Guy L. Hunner. Briefly, the controversy was whether a physician is responsible for the acts of his subordinates. Unfortunately, the lower court believed thus and so placed the above-mentioned damages against Dr. Hunner. The case in point is the one in which Dr. Hunner, after an exploratory incision to determine the condition present in the patient's kidney, found it tubercular and after appropriate treatment instituted drainage by means of cigarette tubes. In removing these drains the resident overlooked one, it evidently having slipped into the wound and thus lost to view as well as in the actual sense. The tract was so tardy in healing that the patient in question, a woman, prevailed upon Dr. Hunner to permit her to return to her home, where the family physician continued to supervise the dressing of the wound. After the lapse of some time while probing around in the wound, this individual discovered the lost drain, which was immediately removed, but the wound continued to drain. The patient was apprised by her physician of what he had discovered and immediately drew the conclusions that the continued state of her ill health was due to the lost drain, and as a consequence instituted suit in the amount of $30,000. After an extended as well as remarkable trial damages were awarded in her favor to the amount of $1000. As Dr. Hunner believed the decision unjust, he immediately had his

attorneys appeal the case. In the eyes of most of the profession, however, the ultimate outcome looked very uncertain, as Dr. Hunner had previous to the trial inadvertently written a letter to the family physician admitting that he was at fault, and regretting the unfortunate occurrence exceedingly; so the reversal of the decision by the Court of Appeals is doubly pleasant to the surgical fraternity. Naturally surgeons will breathe easier when performing operations in which pieces of gauze or drainage material of any sort might in the hurry be lost. The cost of the trial is placed upon the plaintiff, but with the reservation of a new trial, if she so desires. It is, however, believed the decision of the higher court will end the case.

The gist of Judge Boyd's decision is as follows: A surgeon who is called merely to operate on a patient in a hospital, which he does not own or control, is not to be held responsible for any mistakes in the after-treatment of the patient, administered by the hospital staff, unless he was cognizant that such mistakes had been made. The decision can indeed only be looked upon as epoch-making, in that it marks the recognition by the court of the passing of the old days of surgery, when many operations were performed with crude equipment and in the home of the sufferer, and the present day, when practically all operations of import are performed in a properly equipped hospital, where the procedures incident to the operation can be carried out in an orderly and aseptic fashion. Naturally the surgeons of the city look upon the decision as a sweeping victory for the surgical fraternity. It is obviously impossible for a busy operating surgeon to individually dress each and every case upon which he has operated. If such were possible it would not be well for those who come to operation later, as there would be great probability of the surgeon carrying infection to a clean case, with the possibility of a fatal outcome. Moreover, it is out of the question for a surgeon who is doing any amount of surgical work to devote any considerable amount of time to the dressing of cases, else he would accomplish little more. The Maryland Medical Journal, in behalf of the entire medical profession of Maryland, takes this opportunity of congratulating Dr. Hunner upon the final outcome of the trial, and only regrets that he has been given so much obnoxious advertisement and unnecessary expense and annoyance.

REPORT OF BOARD OF MEDICAL EXAMINERS OF MARYLAND.

QUESTIONS AT THE DECEMBER (1913) EXAMINATIONS.

OBSTETRICS.

1. Describe symptoms and treatment in a case of adherent placenta (third stage of labor).

2. Describe the changes which commonly occur in the head of the child in vertex presentations during a lingering labor, and state their causes.

3. Give varieties of placenta previa.

4. Describe Harris's method of dilatation of the cervix.

5. Give methods of inducing labor at the eighth month.

6. What are the indications for the use of forceps when the head is at the pelvic outlet?

7. What form of malignant disease may attack the uterus?

8. Describe umbilical hernia of the newborn.

9. What troubles are liable to occur in the mouth of an infant, and what measures would you use to prevent them?

10. Describe the Porro operation, or celiohysterectomy.

PATHOLOGY.

1. Describe mode of transmission of and prophylactic measures used to guard against malarial fevers. What are the principal pathologic changes noted in chronic estivo-autumnal malaria.

2. Describe the general pathologic changes noted after death from congenital heart disease. (Morbus caeruleus).

3. Describe the morbid changes occuring in and the anatomical changes that may result from gonorrhoeal epididymitis.

4. What are adenoids? Discuss the usual pathologic results of well-marked neglected cases.

5. Give practical directions for preventing the spread of typhoid fever.

6. Describe the lesions found in herpes zoster.

7. How does acute miliary tuberculosis originate?

8. Describe a hemorrhoid.

9. What is the difference between a sinus and a fistula?

10. Define edema. Mention at least five conditions that will cause edema of both legs.

SURGERY.

1. Give the causes, symptoms and treatment of acute iritis.

2. Give the symptoms and treatment of suppurative mastoiditis.

3. What is the significance of blood in the urine?

4. Give symptoms, diagnosis and treatment of tuberculous disease of the knee.

5. What inflammatory conditions may arise in the right iliac region, with symptoms of each?

6. Give etiology and symptoms of cerebral abscess.

7. Give differential diagnosis of dislocation of hip from fracture of surgical neck of femur.

8. State the most common seat of fracture of the clavicle; give symptoms and describe a method of treatment.

9. What are the indications for removal of the mammary gland?

10. Describe a complete inguinal hernia; give symptoms of strangulation and treatment.

PRACTICE.

1. Define: (a) Endemic disease. (b) Anasarca. (c) Bell's paralysis. (d) Herpes zoster. (e) Hematemesis.

2. Define: (a) Chlorosis. (b) Hemophilia. (c) Hodgkin's disease. (d) Aphasia. (e) Hydro-nephrosis.

DIFFERENTIAL DIAGNOSIS.

3. Differentiate: Variola and varicella.

4. Differentiate: Broncho and lobar pneumonia.

5. Differentiate: Neuritis and rheumatism.

6. Differentiate: Hepatic, intestinal and renal colic.

TREATMENT.

7. Give treatment of lobar pneumonia.

8. Give treatment of variola.

9. Give treatment of tetanus.

10. Give treatment of acute nephritis.

PHYSIOLOGY.

1. Where is the respiratory center located? (b) What is the relation of respiration to the nervous system? (c) Describe a method of producing artificial respiration.

2. Define secretion and excretion. (b) What is the difference between external and internal secretion? (c) Name the glands of each class.

3. What is meant by the "balance of nutritive exchange," and how is it ascertained?

4. State what you know of the constitution of muscle tissue, the reaction and constituents. (b) Define rigor mortis and give the cause.

5. What is meant by absorption and nutrition? (b) What absorption takes place in

the mouth, stomach, small and large intestine? (c) What are sources by which the waste products are eliminated from the system?

6. Lymph: description, composition and function. (b) State the theories as to the secretion.

7. What purpose is served by the valves of the veins, and how are they formed? (b) Name some of the veins that have no valves.

8. What is meant by the vasomotor nervous system?

9. What is animal heat, and how sustained? (b) The difference between warm and cold-blooded animals? (c) The normal temperature of the body and the modifying influences over the temperature?

10. Where in the body is each of the following found, and what is the function of each? Pepsin, trypsin, glycogen, ptyalin, synovia and saliva?

MATERIA MEDICA.

1. What is an acid? Name those in general use, the doses and strength in which they are used.

2. Name five remedies used hypodermically, and give doses of each.

3. Ammonium. Give six preparations of ammonium and their doses.

4. Name five preparations each of iron, mercury and potassium and their doses. Give the incompatibles of iron and mercury.

5. Write a prescription containing chloral hydrate and bromide of potash for an adult.

6. Name three vermicides. Give average dose and state against which variety used.

7. Give official name and dose of: Dover's powder; paregoric; Donovan's solution; brown mixture; Fowler's solution; Hoffman's anodyne.

8. Aconite. Veratrum viride. To what class of drugs do they belong? The official preparations and doses?

9. Antimony. Give the official preparations and doses. Name two compounds into which antimony enters, and their doses.

10. Diphtheria antitoxin. How prepared? Define "Unit." Give immunizing and curative doses for a child three years old.

THERAPEUTICS.

1. Write a prescription in Latin, without abbreviation, containing four ingredients; state condition for which intended.

2. Write a prescription emulsionizing Ol terebinthina, give dose and indications for use.

3. Give therapy of carbolic acid, symptoms of poisoning and antidote.

4. Give the therapy of hydg. bichlor. symptoms of poisoning and antidote.

5. Name two respiratory stimulants and two vaso-motor depressants.

6. Explain the theory of diaphoresis. Name three diaphoretics.

7. Explain the immunizing and curative effects of an antitoxin.

8. Give the therapeutics of aconite.

9. Strophanthin: Therapy and best method of administration.

10. Gastric lavage: Method of use and general therapy.

ANATOMY.

1. Give the characteristic anatomical features of the first, second and tenth ribs.

2. Describe the greater omentum.

3. Describe the quadriceps extensor muscle.

4. What nerves are found in the orbit?

5. Describe the rectum.

6. Name (a) temporary teeth, (b) permanent teeth.

7. Describe the bladder.

8. Describe the external ear.

9. Give the location of openings from the accessory sinuses into the nose.

10. Bound the anterior and posterior triangles of the neck.

CHEMISTRY.

1. Define and give example (formula) of (a) Acid salt. (b) Tribasic acid.

2. A patient to whom the doctor gave a large dose of calomel became nauseated and took lime water as a remedy: What chemical changes probably occured? Illustrate by formulæ.

3. Give the chemical names and formulæ of the following: Sugar of lead, flowers of sulphur, blue vitriol, white lead, red lead, baking soda, quicklime, lime water, limestone, bluestone.

4. Nitrous oxide: Preparation, chemical and physical properties.

5. Sulphur: Source and preparation. Name three (3) inorganic chemical compounds containing sulphur, and give formulæ.

6. Iron: Source and valence. Give names and formulæ of three (3) inorganic compounds containing iron. Give one reaction of iron with a monobasic acid (write formula).

7. Arsenic: Source and valence. Give the most important inorganic compound with formula. What is its most important organic compound from a medicinal standpoint? Is this a natural or a synthetic compound?

8. A sample of well water examined by the State Chemist showed the following: Free chlorine, 13 parts per M; nitrates, 0.18; nitrites, 0.5; albumenoid ammonia, trace. Comment upon this.

9. Chloroform. To what class of chemical substances does it belong? Give graphic formula. Give its physical and chemical properties.

10. Point out the analogy between marsh gas (paraffin) and the benzene series of hydrocarbons. Name two (2) prominent members of each group.

Summary of Results of Examination Held by the Board of Medical Examiners of Maryland, DECEMBER 9, 10, 11 and 12, 1913.

No.	College of Graduation.	Anatomy	Surgery	Pathology	Obstetrics	Practice	Chemistry	Materia Medica	Therapeutics	Physiology	Total	Average
1	University of Maryland, '13	75	..	..	..	81	..	75	..	75	...	..
2	Meharry Medical, '12	43	75	..	40	68	60	54	55	68	...	..
3	Eclectic, Cincinnati, Ohio, '12	56	77	60	..	68	75	66	..	77	...	..
4	Maryland Medical, '13	90	85	79	77	79	95	85	88	86	764	85
5	College of Physicians and Surg., Balto., '11	50	75	56	75	71	60	77	79	56	599	66
6	Maryland Medical, '13	56	64	71	70	75	50	66	71	80	603	67
7	College of Physicians and Surg., Balto., '13	80	87	77	79	82	75	75	86	86	727	81
8	Maryland Medical, '13	75	78	84	89	75	62	89	76	85	713	79
9	Maryland Medical, '12	75	75	77	83	75	79	75	69	67	675	75
10	University of Maryland, '13	46	81	..	..	75	65	..	..	..	...	..
11	Baltimore Medical, '13	90	80	86	93	76	97	91	92	94	799	89
12	Jefferson Medical, '10	82	78	92	89	81	67	86	94	90	759	84
13	Baltimore Medical, '13	59	79	75	90	68	63	66	88	66	654	73
14	University of Maryland, '13	71	75	79	77	80	80	75	80	75	692	77
15	University of Maryland, '13	78	81	86	79	75	68	82	78	78	705	78
16	Baltimore Medical College, '13	..	80	96	..	80	..	..	..	88	...	..
17	Maryland Medical, '12	..	75	76	66	67	..	..	64	..	...	..
18	University of Maryland, '11	..	..	..	75	75	80	76	75	..	...	..
19	University of Maryland, '13	73	86	93	89	78	97	93	92	77	778	86
20	Maryland Medical, '13	Failed to appear.										
21	Maryland Medical, '13	80	82	78	78	75	83	84	77	87	724	80
22	Temple University, '12	57	78	65	77	76	98	85	81	75	692	77
23	Baltimore Medical, '13	Failed to appear.										
24	University of Maryland, '12	62	81	78	87	77	55	65	69	89	663	74
25	Johns Hopkins, '12	69	85	89	91	89	79	75	78	90	745	83
26	University of Maryland, '12	80	81	90	..	80	88	84	..	80	...	..
27	Johns Hopkins, '10	80	83	90	93	79	90	90	88	80	773	86
28	Edinburg University, '11	88	86	98	70	75	93	75	91	88	764	85
29	Maryland Medical, '12	67	..	..	68	67	..	00	..	..	...	..
30	College of Physicians and Surg., Balto., '13	80	82	78	94	83	99	93	86	70	765	85
31	Woman's Medical of Phila., '13	55	77	84	92	75	57	83	92	78	693	77
32	College of Physicians and Surg., Balto., '13	82	81	92	86	79	88	78	83	75	744	83
33	Baltimore Medical, '13	45	76	68	70	75	80	59	69	81	623	69
34	University of Greece, '10	43	75	60	57	65	47	28	67	54	496	55
35	Maryland Medical	82	..	..	..	..	..	77	..	75	...	..
36	Maryland Medical	80	..	..	..	..	63	83	..	58	...	..
37	University of Maryland, '12	56	75	85	88	76	55	37	73	80	629	70
38	Maryland Medical, '12	60	67	50	..	58	..	..	..	75	...	..
39	University of Maryland, '13	72	79	77	79	82	75	67	81	70	682	76
40	University of Pennsylvania, '09	62	86	81	92	88	60	70	92	75	706	78
41	George Washington University, '10	78	78	75	68	78	81	78	82	69	687	76
42	Jefferson Medical, '11	94	95	84	96	84	86	87	100	95	821	91
43	College of Physicians and Surg., Boston, '11	52	76	57	..	65	75	..	..	64	...	..
44	Baltimore Medical, '13	77	79	89	94	80	76	81	81	82	739	82
45	University of Maryland, '13	94	87	98	96	92	98	90	94	77	826	92
46	Maryland Medical, '10	Failed to appear.										
47	College of Physicians and Surg., Balto., '13	57	78	85	75	70	55	64	80	66	630	70
48	University of Maryland, '12	68	75	63	68	70	62	75	66	75	622	69
49	University of Maryland, '11	1	76	78	..	..	75	75	82	76	...	..
50	Tuft's Medical, '13	89	88	96	70	83	84	83	91	86	770	86
51	Maryland Medical, '12	61	72	83	68	75	65	62	83	79	648	72
52	Meharry Medical, '13	67	59	42	55	..	..	51	60	78	...	..
53	Maryland Medical, '13	..	63	54	..	68	38	62	..	82	...	..
54	Maryland Medical, '12	56	75	49	..	69	..	50	42	48	...	..
55	George Washington University, '12	85	80	90	90	79	88	87	90	94	783	87
56	College of Physicians and Surg., Balto., '13	80	38	69	..	68	82	75	88	87	...	..
57	Medical College of Virginia, '13	75	..	..	..	75	..	..	76	85	...	..

In the above summary an average of 75 is required of those participating in the examination for the first time in order to secure a license. Those who have failed are eligible to re-examination at the expiration of six months. They are then obliged to receive a rating of 75 in each branch in which they are re-examined before license can be issued. Under the Maryland laws, students who, at the end of their second year, have successfully passed their college examination in Anatomy, Chemistry, Materia Medica and Physiology are entitled to examination by the Board of Medical Examiners in these branches. The ratings made by these students in the examination known as the "second-year examination" are carried forward and made part of the final examination, when an average of 75 must be obtained to secure a license. We trust that this statement will make clear the apparently incomplete examination of certain participants.

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THE NEED FOR GREATER ACCOMMODATIONS IN THE SYDENHAM HOSPITAL FOR INFECTIOUS DISEASES.

By John Ruhräh, M.D.

I HAVE been asked to speak for a few minutes on the subject of the need of greater accommodations in the Municipal Hospital for Infections, that is the Sydenham Hospital. To speak of the need of hospital accommodations sufficient to look after all cases of infections desiring or requiring hospital treatment in a city such as Baltimore, and before this audience, would seem at first thought to be entirely unnecessary, and yet when we compare the provision made by this community for this class of patients, and what is being done elsewhere, we see that Baltimore is sadly lacking. It will not be necessary to go into the reasons of why Baltimore has lagged so far behind other communities. They are, perhaps, not far to seek, but I wish at this time only to call your attention to the fact that the proper provision for caring for infectious diseases in hospitals should not be regarded as conferring a particular benefit upon the individual who receives the treatment. It should be considered in the light of a benefit conferred upon the entire community, for each case of an infectious disease acts as a focus from which new cases arise and every patient properly isolated means many less cases in the future.

It is an undoubted fact that hospital accommodations should be made for patients suffering from all classes of infectious diseases, but there are two diseases which more than all others need at this time to be considered. I refer to scarlet fever and to diphtheria. Both of these diseases, as you all know, are spread chiefly in two ways: first, by the direct infection of the individual from the patient suffering with the disease, and, secondly, by carriers, those who retain in their bodies germs of the disease without actually having it or who retain them for unusually long periods after the attack. It needs no argument to make clear that if the

individual suffering with diphtheria and scarlet fever is isolated from the rest of the community there will be but few cases or carriers. I do not mean to say that the providing of a sufficient number of beds for these diseases would wipe out these two infections. It certainly would not, but it would lessen the number of cases tremendously.

After years of struggle Baltimore is provided with 36 beds, 18 of which may be used for diphtheria and 18 for scarlet fever. Sometimes an overwhelming number of one or other of the diseases makes it impracticable to care for more than one of the diseases at a time. In Baltimore, in 1912, there were 950 cases of scarlet fever and 1036 cases of diphtheria. In a certain proportion of these proper isolation could be carried out at home, but in the crowded homes of the poor and in the modern apartments the isolation of such dangerous infectious diseases is impossible. No provision whatever is made for the care of negro patients. When one considers that a very large proportion of the servants of this city are negroes, most of whom live in small, overcrowded houses, under the most unsanitary conditions, and that they go back and forth from their own homes, where there are frequently virulent infectious diseases, to the homes of the intelligent and educated citizens, where they are in close contact with the entire family, and especially the children, one cannot but wonder at the apathy of the average Baltimorean. It should be the duty of the health department to remove all such cases to a place where they would no longer be a danger to the community. This, of course, cannot be done unless the city provides adequate hospital accommodations for both white and black, and not only for the very poor, but for the well to do as well. There occur in Baltimore every year cases in boarding-houses, in hotels, in transit through the city, and the like, a great many cases of scarlet fever and diphtheria which tax to the utmost the ingenuity of those who have to deal with them. There is, with the exception of the meager accommodations to which I have referred, absolutely no place in which these patients can be cared for and they are thrown upon the charity of friends or strangers.

In 1904 Dr. Rosa Engelmann of Chicago secured information concerning hospital facilities for the care of diphtheria and other contagious diseases from 25 of the largest cities in the United States. In most of these cities more or less adequate provision was made for the isolation of smallpox, just as Baltimore makes ample provision for the isolation in care of persons with this disease, but when it comes to other infections, which are a constant menace and which actually do much more damage than smallpox, it was found that 10 of the cities made no provision whatever for the care of infectious diseases, and there were only three cities which had more than 100 beds and only five cities with more than 55.

Engelmann speaks of Baltimore as follows: "The foremost university town in the country, and a great shipping port, and abso-

lutely no provision for what I hardly consider the *'minor'* infectious diseases, upon which millions of dollars each year are spent in their care rather than in their prevention." The whole situation with regard to the care of these common infectious diseases is so out of harmony with our knowledge on the subject that it seems truly strange that more is not done in this direction.

In New York city there are at present approximately 1800 beds for contagious diseases, and inside of a few months a sufficient number will be added to make the number over 2000. With a population estimated at 5,000,000, this is in proportion to one bed to 2500 of the population. The Philadelphia Hospital for Contagious Diseases at present has a capacity of 180 beds for scarlet fever and 80 beds for diphtheria. When the hospital is completed it will have a capacity of 300 beds for scarlet fever and 200 beds for diphtheria. During the winter just past as many as 400 scarlet fever patients and 130 diphtheria patients were cared for in the Philadelphia Hospital at the same time. Philadelphia's estimated mid-year population for 1913 is 1,631,960. In the year 1912 62 per cent. of all cases of scarlet fever and diphtheria (scarlet fever, 2872, and diphtheria, 3082 cases) reported were taken to the Hospital for Contagious Diseases. The Philadelphia Health Department would like to take care of at the hospital at least 90 per cent. of all cases of scarlet fever and diphtheria.

In Boston there is accommodation for 120 diphtheria cases, 120 scarlet fever cases and 60 measles cases. Owing to the large number of patients needing care, these numbers are frequently exceeded so that the hospital is crowded beyond the normal limit. This gives an accommodation in Boston for three out of every 10,000 of the population, that is about one infectious bed for every 3300 inhabitants.

The question as to what would represent a sufficient number of beds for the acute infectious diseases may be answered by the experience of the English and Scotch cities. In Glasgow, in Edinburgh and in London there are accommodations for nine out of every 10,000 of the population, and this may be taken as the minimum number of beds that will care for the infectious diseases in anything like a satisfactory manner. The ratio of one bed to each thousand inhabitants would be still better and certainly ought not to represent an impossibly large investment for any city when one considers the great good that can be accomplished with a comparatively small amount of money. The ideal would probably represent hospital accommodations for one out of every thousand inhabitants with sufficient temporary accommodations to care for any epidemic of unusual severity. The whole question of the care and management of a municipal infectious disease hospital is one in which our knowledge is undergoing very radical and important phases. This part of the subject cannot be considered at this time, the main point is to emphasize the careless attitude taken toward the infectious diseases at the present time by the inhabitants of Baltimore.

FIBROIDS AND PREGNANCY—THREE CASES.

By William S. Gardner, M. D.
Professor of Gynecology, College of Physicians and Surgeons, Baltimore.

THE incidence of pregnancy and uterine fibromyomata is not rare, but in the vast majority of the cases the tumor is in the upper part of the uterus and is subperitoneal. Fibroids in this location, unless very large, have little or no influence on either pregnancy or labor. When, however, the growth is from the lower segment of the body or from the cervix the condition becomes a serious menace both to the mother and to the child.

An absolute essential to the proper management of these cases is the early recognition of the condition so that all complications may be anticipated and prepared for.

Occasionally a fibroid develops in such a position and becomes of such size as to make it at least highly improbable if not actually impossible for the pregnancy to go to full term. When this occurs it is the duty of the attendant to act first and by removing the tumor give the pregnancy its best chance for development and maturity. This variety is illustrated by case A.

Case A, 1190, was admitted to Mercy Hospital January 30, 1908, aged 38. She has had two children, the last one nine years ago. The last menstrual period was November 25, 1907. Since the last pregnancy, nine years ago, the flow has been regular but scanty, continuing only one day. There was some pain for one day. Bowels constipated, urination normal.

She first noticed a lump in the lower abdomen three years ago. It apparently did not increase in size and gave very little discomfort, except when she was much on her feet. During the past two months the growth has increased in size rapidly, and she has been greatly annoyed by pulsations in it.

On physical examination the heart and lungs were found normal. The abdomen was somewhat distended with a distinct protuberance below the umbilicus. There was dullness on percussion from the umbilicus to the pubis. A large, hard, movable mass could be felt filling up the lower abdomen. By the vagina the cervix was found turned upward toward the symphysis; the tumor was attached to the uterus anteriorly; beneath the tumor, lying in the hollow of the sacrum, was the enlarged, cystic, pregnant uterus.

Diagnosis: Retroverted, pregnant uterus complicated by a large fibroid.

The first question that came up was: Can this woman, unassisted, go to full term? This was answered in the negative, because it seemed entirely impossible to conceive of this tumor, which was rapidly enlarging and already reaching the umbilicus, being pushed high enough and far enough forward to allow the retro-

verted uterus to escape from beneath the promontory of the sacrum and develop in the abdomen. In my judgment the immediate removal of the tumor was less hazardous to both the mother and the child than anything that might be hoped for from delay. Consequently the patient was advised to have an operation done at once for the removal of the fibroid. She was told that the operation might produce a miscarriage; but that on the other hand the probability of going to full term in her present condition was practically nil.

Operation, February 3, 1908. The abdomen was opened in the median line below the umbilicus. The tumor had the peritoneum stretched loosely over it in such a manner that the size of the attachment to the uterus could not be seen. After the peritoneum was stripped off a very short but relatively narrow pedicle was seen connecting the tumor with the uterus near the junction of the body with the cervix. The pedicle was cut through and the hemorrhage from it controlled by a number of catgut mattress sutures. The peritoneum was brought together over the stump, the uterus raised to the proper position and the abdomen closed.

The convalescence from the operation was uneventful. She left the hospital February 25.

In August, 1908, her physician wrote me: "Mrs. M. gave birth to a nine-pound boy July 27th. It was an easy and normal birth; both mother and child are doing splendidly."

The tumor removed was an ovoid fibromyoma, measuring fifteen by sixteen centimeters.

When a fibroid is in such a position that it absolutely obstructs the pelvic canal it may still be where it does not interfere with the development of the pregnant uterus. When a case of this kind has gone to full term it is folly to allow the woman to become exhausted in labor by efforts that can result in nothing but damage. And under the same conditions attempts to use forceps, version and all such aids as are useful in moderate dystocia are contraindicated and far more fruitful of harm than of good. The conservative operation here is Caesarean section. This type of cases is illustrated by Case B.

Case B, 4590, aged 30, was admitted to Mercy Hospital February 24, 1911. The present was her first pregnancy. The last menstrual period was May 19, 1910. Before that her periods had been regular and the flow continued seven or eight days. She had been under observation for several months, and her general health was excellent.

Some time in the latter part of the summer of 1910 I was asked by her physician to see her with him. He told me that she was pregnant and that she had a fibroid that almost filled the true pelvis. My own examination only confirmed this diagnosis. It was clear that delivery by the ordinary route would not be possible. We decided at that time to deliver her by Caesarean section when

the full term of pregnancy would be complete, and which we estimated would be February 25th, 1911.

She entered the hospital February 24 and the operation was set for 9 o'clock the next morning. Early on the following morning labor pains set in and the bag of waters ruptured. Immediate preparation for operation was made and carried out two hours ahead of the scheduled time.

The abdomen was opened, the uterus incised and the child and placenta removed. A hysterectomy was then done in just the same manner as if a Caesarean section had not been made.

The child weighed nine pounds, and both it and the mother left the hospital in excellent condition March 18th.

This case differed from the one first related in that in this instance the developing uterine body was in the abdomen above the fibroid and there was nothing to obstruct its development. The size and position of the tumor, however, absolutely obstructed the birth canal and made a suprapubic delivery necessary. In the first case the uterus was retroverted and the large fibroid was on top of it, jamming it deeper into the pelvis. It was not in a position to interfere with delivery, but was in a position to almost certainly interrupt the pregnancy.

The third case differs from both the others. In this instance the fibroid was located in the lower segment of the posterior uterine wall, and on account of its position gave rise to much apprehension, but no positive trouble. It belongs to the borderline cases. One that only a slight variation of size or position of the tumor might call for as radical treatment as case B.

Case C, 1823. About the year 1900 this patient had a ventrosuspension done for a retrodisplacement of the uterus.

I saw her for the first time September 2, 1910. She was then aged 35, married, and had never been pregnant. The appetite was good; the bowels constipated; micturition frequent, but not painful.

The last menstrual period occurred August 16; twenty-eight-day periods; the flow continues from seven to ten days very profusely; no dysmenorrhoea.

One week before each menstrual period there is a severe, recurrent pain in the pelvis, which lasts for five or ten minutes. There has been much backache for the past week. She becomes very nervous when lying down, and cannot lie upon her back.

On physical examination the uterus was found retroverted and very much enlarged.

She entered Mercy Hospital September 8, and the following day the abdomen was opened and a submucous fibroid was removed through the anterior uterine wall and a round ligament suspension of the uterus was done. Search was made for other fibroids, but none were detected. From this operation the recovery was uneventful, and she left the hospital September 23, 1910.

In June, 1911, she had an early miscarriage. At this time it was

discovered that a small fibroid had developed in the lower posterior segment of the uterus. Its growth had been stimulated by the pregnancy. The patient refused to have the fibroid removed.

In September, 1911, she again became pregnant. The little fibroid, which could not be felt or seen in 1910, having been stimulated in its growth by the first pregnancy, during the progress of the second pregnancy increased in size rapidly. At any time during the first half of the pregnancy the tumor could be palpated easily through the posterior vaginal wall. It was within the true pelvis and was sufficiently large to offer a great obstruction to labor if it remained in that position. Fortunately, as the uterus increased in size the fibroid was raised above the brim of the pelvis. This position of the fibroid was so much more favorable than had been hoped for that we believed that labor could terminate naturally. Being fearful that when the labor began the tumor might be pushed down into the pelvis, she was sent to the hospital just before the completion of the term of pregnancy in order that we could take immediate action for the relief of any complications arising during labor.

She was delivered perfectly normally July 12, 1912.

6 West Preston street.

SOME PHYSICAL EFFECTS OF INDUSTRY UPON THE WORKING CHILDREN OF MARYLAND.

By J. C. Travers, M. D.

ONE of the most significant and important features of our work as medical examiners of the Maryland Bureau of Statistics and Information has been the finding and isolation of the diseases and defects of occupation among the working children of our city and State. The diseases incident to child labor are, comparatively speaking, in a class to themselves, due chiefly to the susceptibility of the undeveloped child, whose physical stamina is weak and whose power of resistance much less than that of the mature adult, and whose mind being less active and alert and the judgment immature, renders it less likely to protect itself when engaged in hazardous or dangerous works.

The exploitation of child labor is a harrowing story and one of the dark spots on the page of the industrial history of our country. The advent of the great variety of special machinery and unskilled methods of manufacture, as well as parental greed and poverty, and the encouragement of employers called into action a growing army of youthful workers. The drawbacks to child labors are that children are deprived of leisure and freedom in the open air and are subjected to a monotonous life when they ought to have variety. The physical effects outside of the diseases incident

to trade are those of degeneracy, as seen in stunted growth and impaired nutrition; while of the moral effects, illiteracy and its consequences are the more immediately apparent. Factory legislation in this country as abroad, began with the curtailment of women and children's labor, shortening of the hours and the improvement of the conditions under which labor generally is carried on. As modern industrial and economic conditions demand cheap unskilled child labor, it is imperative that our duty is to render this labor as little injurious as possible, and so administer as to protect and conserve the industrial life and general welfare of our nation's children. The industrial physical condition of the child, as of the adult worker, is peculiar to the locality, the climate, the race, and the temperament, as well as the characteristic industries of the locality. There is probably no city in the country that embraces more varied or complicated kinds of industries than Baltimore. Here we have factories for the manufacture of every kind of commodity and such as to allow the employment of the unskilled child laborer in great numbers, with no adequate factory inspection or regulation to protect them. No person should be employed in a dangerous trade until the risks have been explained to him by the employers and decided means taken whereby danger in health may be averted.

The chief conditions met with in our factories, as elsewhere, as tending towards industrial disease, are imperfect ventilation, absence of means for the withdrawal of dust, imperfect supervision of the workers and inadequate washing appliances. Want of cleanliness has long been recognized as an important contributing factor, especially when combined with poverty, deficient food and clothing and improper housing; but these are economic and social conditons and problems which travel hand in hand with our industrial life. Of the children engaged in factory work in Baltimore, all being over 14 years of age, we have succeeded in isolating nearly 100 diseases and defects due to occupations. This data represents the findings out of about 1500 factory children examined and is limited chiefly to about 12 principal industries. In our occupational disease findings we have not included that large number of children suffering with asthenopia or eye strain due to the overuse of tender eye muscles in improper light and the constant alertness required in the manipulation of machinery or intricate work. There are a large number of these cases and they furnish by far the largest class of occupational defects. For example, we find among the children just beginning work less than 5 per cent. of defective vision and eye strain, where as among the children long employed in factories the percentage ran as high as 10 per cent. to even during one month 20 per cent. The most numerous diseases found were those conditions due to the inhalation of dust, which is the greatest enemy of the factory worker. Of the 100 cases, 28 were found to have irritation or inflammation of the respiratory passages, such as rhinitis, laryngitis and

bronchitis, among such boys as engaged in sandpapering, woodwork being an inorganic dust irritant, or metallic dust such as inhaled by tin workers, and chemical dust breathed by the children engaged in bronze works. Bronze workers frequently present a pharnygeal vault completely gilded. This dust would also get in the hair and clothing, irritate the scalp and produce severe dermititis. Another harmful dust to these children was also a chemical or mineral dust. Children, both girls and boys, being engaged in filling bottles with yeast powder, the dust of this process was very profuse and set up bronchial irritations, besides producing a toxic effect with symptoms of neuralgia, nausea, gastric pain. Their hair would fall out and many of them become pale and weak. Cotton, hair and broom fiber were the chief offending factors among the organic dust workers. In the boys employed in the cotton mills we found the most severe form of bronchial irritation, and one case of cotton fibroid phthisis. Of the diseases due to fumes of chemical or mineral irritants and poisons the most notable was among the boys employed in washing copper; here, out of 8 boys examined, 4 were found to have ulcers of the nasal septum and sore eyes, with eventually atrophy of the nasopharyngeal mucous membrane and soft structures, due to irritant and caustic properties of the acid and mineral-laden atmosphere of which they breathed. We also noted a similar condition in several boys employed in the tin and enamel works, where there existed practically the same irritant atmosphere as the copper works; fumes of HCl and zinc chloride, lead and dust formed the principal atmospheric irritants and poisons. One boy working adjacent to solder workers presented symptoms of solder poison, which is about the same as acute lead poison, plus nasal irritation. Working in enamel is a very dangerous occupation on account of the presence of lead; also block tin, which contains as high as 60% of lead. Quite a large number of children were affected by various forms of organic chemical toxins, complaining as a rule of headache, nausea and vomiting, gastric pains, weakness and were pale and anemic. These conditons were found principally among children employed in handling freshly made window shades; inhaling fumes of oils, quick dryers, such as turpentine or benzine, alcohol and organic or aniline stains or coloring used in their manufacture. A few cases of toxic amblyopia were also noted among these workers. Then again in boys working adjacent to varnishers and stainers in chair and furniture factories, there are also prevalent fumes of turpentine gums and inorganic colorings and lead. Children employed in making buttons composed of hot fuming horn tissue, the fumes of this tissue together with the steady heat produced quite an intense form of toxemia in a number of these children. A similar condition was detected among several children working in the hair brush and broom factories through the inhalation of fumes of decayed hair and broom corn. Boys and girls employed in candy factories making chocolates

and candy were likewise occasionally affected through the inhalation of the fumes of hot candy, glucose, sugar, flavorings, the latter two probably being coal tar derivatives, also constant heat; these affected children, in addition to the usual symptoms of toxemia, nausea, vomiting, tremor, etc. They complained of dizziness and faintness; the skin was cold and clammy, and they became weak and nervous. Probably the next defects of importance were among the children suffering from myalgias, or muscular strains, due to the effect of carrying heavy loads; heavy work and the heavy straining character of their work. We find these sufferers employed in the various clothing factories carrying heavy bundles of clothing, carrying and lifting boards and boxes in the box factories and in packing tin cans in canneries; the latter suffered with stiff and sore backs and arms; several workers also developed arch troubles due to long standing on weak undeveloped feet and legs.

Of the most serious defects found was that of two boys who developed serious heart disease or defects due to their being compelled to walk or run long distances while delivering messages for a messenger service company. The physical strain on the heart caused by the excessive exercise proved too great and resulted in cardiac hypertrophy, dilatation and insufficiency. Our experience has taught us to believe that the great number of the cases of myopia which we find in these children almost daily is due to the result of occupations, by performing constant near work under bright electric lights. Another great class of occupational defects of which the number is legion among these youthful workers is the various forms of fatigue or occupational neuroses, where the long hours, the heavy strain of labor upon young undeveloped bodies and nerves, especially before the completion of puberty, and the nerve energy spent in constant alertness incident to the working of machines, some of them intricate and dangerous, results in a disorganization of the nervous system with its long train of nervous symptoms and a picture of a pale, haggard child. These conditions are naturally more prevalent among girls than boys, but due to the anxiety of the working child to procure a working permit, and the craft they employ in covering their physical defects it is hard to procure reliable data. On the completion of the physical resurvey of the children employed in factories, we will be in a better position to furnish more complete and reliable data concerning industrial anomalies, judging from what we have seen and found during a year spent in this work, we see most clearly the importance and the necessity of a more thorough study, control and correction of the general industrial and factory labor. This to my mind can best be brought about by the creation of a State Industrial Commission and a properly organized and equipped medical force under the control of the State Department of Health, with arbitrary powers to deal with all the great problems of industrial life. Then we can reasonably ex-

pect through the evolution of industrial chemistry and hygiene the making of great strides toward the prevention and obliteration of occupational maladies and mishaps, and the promotion of the general welfare of the most neglected and numerous of the world's workers.

The following is a summary of the occupational defects found during the past six months from the re-examination of about 1,500 boys employed principally in factories:

2 cases chronic copper poison.
2 cases acute copper poison.
2 cases occupational cardiac disease (organic) from excessive strain due to over-exertion in running and walking.
1 case nasal ulcers from chemical irritants.
2 cases nasopharyngeal ulcers and inflammation from chemical fumes.
9 cases acute occupational pharyngitis and bronchitis from inorganic dust.
3 cases occupational dermatitis, local action of chemicals and irritants.
3 cases occupational anemia.
4 cases tobacco pharnygitis and nicotine toxemia--from dust and fumes of tobacco.
4 cases progressive myopia—accelerated by occupation.
14 cases nasopharyngeal and bronchial irritation from organic dust and fumes.
12 cases toxemia or poison from organic chemical fumes.
4 cases occupational and fatigue neuroses.
1 case hypertrophic rhinitis from organic fiber dust.
3 cases toxemia or poison from inorganic fumes and chemicals and dust.
1 case occupational, chronic bronchitis from constant dampness in canneries.
2 cases subacute bronchitis from chemical fumes.
17 cases ocupational myalgias, muscular strain, cramp and soreness.
1 case pedal workers' cramp (button factory).
1 case doffers' cramp (cotton duck mill).
1 case acute toxic amblyopia from organic chemical fumes.
1 case solder poison from fumes of solder.
1 case toxemia from inhalation of fumes of wood alcohol.
1 case fibroid phthisis (cotton duck mill).
1 case acute lead poison (chair factory).
1 case severe laceration hand (left), stiff and sore, by tin printing machine.
6 cases severe burns on face and hands from hot wax.
1 case laceration of eye (cornea) by knife, coring apples, causing complete blindness and affecting sight of other eye.

1 case infected hands from burns.
1 case asphyxia, buried under cork.
26 cases lacerated, mashed, sore or inflamed hands and arms, chiefly from sharp tin, running machines, saws, handling tin cans.
8 cases irritated and sore hands from handling chemicals.

SYMPTOMATOLOGY OF CEREBRAL ABSCESS.*

By *Charles W. Richardson,*
Washington, D. C.

The symptoms of cerebral abscess is a somewhat complex one, varying in character according as we view them from its inception, during its period of latency, with evidence of intracranial pressure, or during its terminal stage. To take up the consideration of the subject in its various stages would occupy too much of your valuable time, therefore I shall attempt to discuss the symptoms as manifested from the late formative period through that of latency, during the time when they are usually brought under our observation, and in the period when the early diagnosis correctly made counts so much for the possible future welfare of the patient. Indeed, unless the patient is already under our observation, we rarely see them at the onset of the cerebral complication. With a patient under our immediate observation affected with an acute or chronic suppuration from the middle ear, who has a chill, severe headache, with possible nausea and vomiting which subsides within a few days, and the patient assumes a nearly normal condition, excepting as to the head pain, many of us would become suspicious of an intra-cranial complication and watch intently for the development of those more impressive and exact symptoms which will lead us to the correct definition of the nature of the invasion.

Trite as it may seem in addressing a meeting of otologists, I should suggest a thorough and careful examination of both ears as the preliminary procedure in elucidating the condition of a suspect of intra-cranial lesion. The condition of the canals, the presence of exudate and its character, the making of smears and cultures, the amount of destruction of membrane and the location of perforation, and careful investigation as to the existence of fistula, may be, and usually is, of material assistance in clearing up the diagnosis, not only as to the character of the case, but also of the probable location of the lesion. The mastoid region should also be carefully examined and palpated. The blood should be examined as to the existence or non-existence of leucocytosis.

One of the earliest and most constant symptoms of cerebral abscess is headache. In the few cases that have come under my

*Read at the meeting of the Baltimore City Medical Society, January 21, 1914.

observation I have never found it wanting. It is not usually so constantly and increasingly severe as the head pain in lepto-meningitis, but is quite as constantly present. It is present in a very acute form in the initial stage, mildly present in the latent stage, and again occasionally severe in the terminal stage. In the acute stage the pain is frequently very intense in the fundus of the ear. Persistent head pain or continuous severe ear pain occurring in any case of suppurative otitis should arouse the suspicion of intracranial complication. Whatever the degree of the pain of the brain abscess, whether severe or simply of the dull boring type, it has one distinguishing feature in that it keeps the patient awake at night. The pain of cerebral abscess is usually unilateral, limited to the side of the head corresponding to the hemisphere affected and is generally localized. It is most frequently frontal, sometimes temporal or over the affected ear, very occasionally occipital. Pressure over the seat of pain occasionally—and percussion over the same area—frequently intensify the pain. Coughing and vomiting intensify the head pain.

Mental symptoms are manifested in some form in most cases of cerebral abscess, and, where one knows the habits of the patient and his temperament, they may be noted quite early in the life of the case. Alteration of temperament is noted quite early in many cases, usually in the form of irritation. Hallucination, irritability of temper, restlessness, boisterousness and confusion of thought are more or less present in most cases. Rarely somnambulistic phenomena are manifested. In one of my early cases of cerebral abscess this condition was present. Occasionally the mental disturbance manifests itself in the form of apprehension, apathy or depression. In a little boy, upon whom I successfully operated, the state of apprehension was the first symptom that attracted my attention to the seriousness of his condition. In all cases in the latter period of the latent stage there is a marked slowing of thought and sluggishness of mental action. The slowness of the mental act is quite pronounced in practically all cases just before the terminal symptoms become manifest. A patient in this state is usually inclined to be quiet, frequently drowsy, and not inclined voluntarily to enter into conversation. They usually have a semi-doped appearance, or move about in a dazed, restless manner. If directly questioned they frequently become alert and readily answer any given question, but immediately lapse into the same taciturn manner. When the stage is more marked they will attempt to answer questions, but do so very slowly and usually after a pause, or may answer only a part of the question asked, and then seemingly drop off into a drowsy state again. The time occupied by a patient in replying to a question may seemingly cause the questioner to doubt whether he has heard or understood it, when at last, to his relief, the patient slowly but accurately gives reply. Also, the patient may have a failure in the power of sustained attention, a partial inability to concentrate his attention on any

given theme but for a few moments. For this reason he may be able only to respond intelligently to the simplest questions, or, wishing to communicate some thought, he may begin to express himself and desist after uttering a few words, may express a wish for some object and not remember the desire when the object is brought.

Insomnia during the latent period, especially if the head pain is marked, is a very noticeable symptom. Even when the headache is not marked the patient may be practically sleepless during the greater period of the twenty-four hours. What little sleep they get is fitful, and they arise in the morning from an unrefreshed slumber. Even though drowsy during the daytime, they may be wakeful through the night.

The temperature reading varies according to the stage of the abscess, but is never of a very active type. During the formative period it may rise as high as 102 degrees, from which it drops to about the normal in a very short interval.

The temperature variation is very slight after the initial rise and fall until the terminal stage is reached. The excursion of the temperature during the day is very slight; it is not unusual to have either a normal or a moderate sub-normal temperature. A temperature varying from a degree below normal to a degree above normal, with other suspicious evidences of intra-cranial involvement, should be looked upon as a strong corroborative evidence of the existence of brain abscess in a given case. A normal or sub-normal temperature is more likely to be present with a deep-seated abscess, while a moderately elevated temperature is more likely to prevail with a cortically-placed abscess. The pulse is of undoubted significance in suspected brain abscess. The pulse rate, like unto the temperature range, is rather inclined to assume a sub-normal rate. Primarily increased in activity in the initial period, the pulse rate in a typical case is gradually retarded until the beats may be reduced to 50 or 40 to the minute. With the onset of the terminal stage the pulse rate usually becomes accelerated.

The respiration may or may not be affected in cerebral abscess. When affected it tends to become abnormally slow, in some cases irregular.

The evidences on the part of the digestive system may or may not be pronounced. Vomiting occurs in a fair proportion of cases. It is very rarely absent in the initial stage. Dench states that it occurs in about 50 per cent. of all cases and is an important diagnostic sign in the initial and terminal stages of brain abscess. Dercum states that it is quite common, but may be only slightly pronounced. Vomiting has not been present in most of the cases which have come under my observation. The tongue is coated, the breath foul, and the bowels constipated.

The general symptoms are usually shown by the evidence of marked illness, as depicted by the patient's appearance and facial expression. The face has an ill, anxious and haggard expression

and is pale or sallow. When the progress of the abscess is slow there is more or less loss of flesh and strength. This condition is probably brought about partially through sepsis and partially through trophic changes. Rigors are not usually present in cerebral abscess, and a case may run its whole course without chill or chilly sensation. Shivering may be present, and, when manifest, it is in the form of cold creeps running over various portions of the body surface.

Changes in the eye ground in the form of choked disk or optic neuritis is an occasional concomitant symptom of cerebral abscess. It is stated to occur in about 40 per cent. of cases. The eye ground should always be examined in suspected intracranial cases for manifestations of changes in the optic disk. Papillitis is more frequently seen in cerebral abscess than optic neuritis, as the rapid development of an abscess does not permit, through the shortness of time, the production of a well-marked neuritis. A papillitis, or optic neuritis, may develop in one or both eyes, and, as it may occur in a right eye with left-sided cerebral lesion, or vice-versa, it cannot be classed as focal or localizing symptoms, and are, on the whole, simply corroborating symptoms of an existing intracranial disturbance. The existence of an absolutely normal eye ground in no wise negatives the existence of a cerebral abscess. Photophobia may be present. The pupillary reaction may or may not be affected, depending in greater measure upon the size, location and the degree of pressure disturbance created. Pupillary changes are usually manifested in the eye upon the side corresponding to the hemisphere in which the cerebral abscess is located. The pupil may be contracted or dilated, or simply show sluggishness of action as compared with its fellow.

Motion changes are not pronounced in cerebral abscess and do not develop until a late stage, although it is not invariable. In some cases, with large cerebral abscesses, we may note a moderate degree of contralateral paresis, especially involving the upper extremity. Indeed, the degree of paresis is so moderate as would escape notice unless investigation is made as to the degree of action of the muscle upon the two sides. The gripping of the hands or the use of the dynamometer will reveal the inequality.

Muscular spasm affecting groups of muscles to general convulsion may be present in otitic cerebral abscess, but are rather rare except in rapidly-forming and large abscesses in the temporal lobe, or when a chronic abscess takes on an acute extension, thus causing pressure on the lower part of the prae-central loble; or an abscess in which there is a limited tendency to the formation of a limiting capsule, with the development of surrounding encephalitis, which latter may extend into the motor areas of the frontal lobe. In two cases of general convulsion, with complete unconsciousness, into which I was brought in order to aid in clearing up the diagnosis, I found evidence of chronic suppuration, with foul-smelling pus. In one case there was a history of suppuration;

in the other there was a negative history, but examination, made with difficulty, proved the existence of a small pin perforation, with a meager amount of ill-smelling pus in the auditory canal. Both cases, even though unconscious, showed sensitiveness to pressure over mastoid of affected ear.

Paralytic phenomena of a general character are rather unusual in cerebral abscess. As the abscess is usually without the motor area, focal symptoms are not common. Paralysis, when occurring, is usually the result of the extension of the abscess, with the attending destruction of a given motor area; or, in partially demarkated abscess, to the zone of encephalitis, which surrounds it and extends into the motor area affected. Such conditions might also be due to secondary abscess or to a small-sized abscess involving the internal capsule. A type of paralysis which is described, although I have never seen such a case in cerebral abscess, is a contralateral hemiplegia with a paralysis of the third nerve.

One of the most characteristic symptoms of cerebral abscess, when manifested, is the presence of aphasia in one of its varied forms. Aphasia is only present when a left-sided lesion occurs in a right-handed patient, and vice versa. The type of aphasia which occurs most frequently in otitic cerebral abscess is the form which is known as sensory aphasia or word deafness. The cytological examination of the blood is not of positive diagnostic value. When the polymorphonuclear percentage is increased above the normal, the case should be looked upon with suspicion.

Lumbar puncture appears to be of the same value as the blood count. Those cases presenting a normal appearing cerebro-spinal fluid which is stenile are more favorable as to prognosis.

The Surgical Clinics of John B. Murphy, M.D., at Mercy Hospital, Chicago. October, 1913. Philadelphia and London: W. B. Saunders Company. $8 per year. Volume II, Number 5.

Volumne two, number five, of Murphy's Clinics contains a wide range of subjects, namely, Tumor of Femur; Cavity Filled with Moorhof Wax; Ankylosis of Hip Following Sore Throat; metastatic arthritis; arthroplasty, abdominal fecal fistula following puncture of the uterus by curet and drainage of retro-uterine abscess; remarks on use of curet; resection of bowel; end to side suture; anastamosis; sarcoma of the thymus gland, etc.

In this volume Dr. E. Wyllys Andrews tersely elucidates his method of herniotomy. This article is illustrated. It is impossible to pick any article specially for lengthy remarks, as each and every one contained in the number is of interest to the surgeon as well as general practitioner. You cannot open the book any place without seeing something of value, let alone practical utility. Like its predecessors, it is chock full of valuable suggestions. Suggestions that tend to simplify the surgeon's work.

THE EARLY RECOGNITION AND THE PRACTICAL PREVENTION OF UTERINE CANCER.*

By W. S. Smith, M.D.,
Baltimore, Md.

A CAREFUL estimate places the number of deaths from cancer in the United States at 80,000 annually—enough to depopulate the city of Baltimore in a very few years. When we consider the relation of our own population to that of the entire world, and think also of the number of cases that are cured, not to speak of those persons who are erroneously reported to have died from some other cause, we can begin to form an idea of the appalling prevalence of this scourge, which is worldwide in its devastations. Of the number of deaths mentioned it is said that at least one-half could be prevented by an early diagnosis. If this statement be even approximately correct, it seems unfortunate that so much money and thought and energy should have been expended in a fruitless search for the essential cause of cancer, while so little has been done to elaborate methods for its earlier recognition, to study the clinical facts in regard to it, and to treat in a practical manner the great problem which it presents. Recently, however, the plan of attack has been along the lines of which I have spoken, and scientists and laboratory workers are earnestly searching for the much-coveted diagnostic key, practicing physicians everywhere are discussing the subject from a clinical point of view, and organizations and philanthropists are busying themselves with *conditions* which need amelioration as well as *theories* which need support.

It is my purpose tonight to speak only of cancer of the cervix uteri, and to present briefly some of the signs and symptoms which may be utilized with advantage in dealing with it in its early and curable stage. First, as to the symptoms. These may be given in a general way as pain, hemorrhage and discharge. It is constantly to be borne in mind, however, that there is no symptom of cervical cancer which is present in all cases, and, in some instances, all the ordinary symptoms may be absent until the inoperable stage has been reached. This fact is one of great practical importance and gives great emphasis to the necessity of a physical examination in all cases in which there is the slightest suspicion of malignancy.

Of the symptoms which I have mentioned, hemorrhage is by far the most important and the most ominous. It may first appear as a prolongation of the regular menstrual period, or as a slight bleeding in the menstrual interval, in the form of a spot of blood upon the clothing or a slight streak in the leucorrheal flow. This

*An address delivered before the Franklin Square Hospital Medical Association, February 3, 1914.

apparently insignificant intermenstrual hemorrhage is said to come from the capillaries in the mucosa which overlies a cancerous nodule or from the diseased tissue itself, and is particularly apt to follow any kind of irritation or pressure upon the affected parts, such, for example, as that caused by long walking, straining at stool and sexual intercourse. In cases where the menopause is supposed to have been passed, the hemorrhage of cancer is frequently regarded with complacency, if not with satisfaction, because it is thought to indicate a re-establishment of the menstrual function. The secret of many delayed cases of cancer lies in this belief, which has hitherto had wide acceptance among women. All the forms of hemorrhage to which I have referred, in a woman between 35 and 60, furnish a sufficient reason for a careful physical examination.

Leucorrhea may be present before there has been any pain or hemorrhage, and some surgeons have placed great reliance upon certain so-called distinctive features of the flow as it is seen in the early stage of cancer. It seems, however, to be an ordinary cervical leucorrhea, the amount of which has been increased by the irritated and overactive cervical glands. I do not think there is anything characteristic about it as an index of the disease in its curable and incipient stage.

Pain, as one of the criteria of early cervical carcinoma, has little or no value. The cervix, as we all know, is comparatively insensitive, and, until the disease has invaded contiguous structures, practically no suffering is, as a rule, complained of. Such invasion having taken place, the location, character and intensity of pain will be determined by the particular structures directly affected or pressed upon by the cancerous growth. Favorite seats of referred or reflected pain are the sacral region of the back, the ovaries, the rectum and the thighs.

The symptoms which I have enumerated are those which are most common in cancer cases, but, as I have said, none of them is in any way characteristic or pathognomonic of the disease. If so, no examination would be necessary. It is, therefore, worthy of repetition that in women of the so-called cancer age no indication, however slight, of the possible existence of cancer should be lightly regarded. Expectancy and therapeutic nihilism find here no possible justification. Duty demands action, and the proper action should be a thorough physical examination, followed, if necessary, by a prompt resort to the microscope.

The physical signs elicited by such examination are of great value. They will depend, of course, upon the location of the epithelial cells in which the disease originates and the direction in which it grows. Cancer of the vaginal portion—the squamous-cell carcinoma—frequently begins upon the site of an inflammatory erosion which has followed an old cervical tear. The beginning of the transition from the benign to the malignant cannot be demonstrated except with the aid of the microscope. A little later, when disintegration of tissue has begun or the cancer has

assumed the so-called vegetating or papillary form, the resulting ulcer or the polypoid mass does become demonstrable by the unaided senses. Before this has occurred, however, it is to be noted that the suspected area bleeds more easily upon being touched than does the simple inflammatory area, and may be noticeably elevated above the surrounding tissue. Careful palpation of its margins may also disclose an indurated edge, while the submucous portion of the cervix is peculiarly dense and hard. When a decided ulcer is found, these characteristics are of course much more marked. The very presence of such an ulcer, or, indeed, of any ulcer, is strongly indicative of malignancy, since we know that benign ulcer of the cervix is extremely rare. The polypoid masses to which I have referred may be found as wart-like growths or eminences which are peculiar in their friability and the readiness with which they bleed upon even the gentlest manipulation.

The most insidious form of cervical cancer is that in which the disease begins in the cylindrical epithelium of the cervical canal. Fortunately, this is relatively uncommon, for in it extensive destruction of tissue may take place without any evidence upon the exposed surfaces. Of course, where there has been a bilateral tear with eversion of the mucosa, this form is more quickly recognized.

Beginning in the mucous membrane of the cervical glands, cancer very commonly appears in the form of nodules in the substance of the cervix. These require to be differentiated from the so-called Nabothian cysts which are so frequently seen in connection with lacerations and are referred to as cystic degeneration of the cervix The exclusion of such cysts is easy, both by their appearance when they project beyond the surface, and by the simple expedient of puncturing them, when the characteristic mucilaginous contents will become evident. An interesting point in connection with these cancerous nodules is that the mucous membrane which overlies them is not alone congested, but upon palpation it seems glued to the structures beneath and does not glide readily over them, as in the normal and in benign conditions. This is an extremely suggestive sign, and is, I take it, analagous to the retraction and dimpling of the skin, which furnish so valuable a diagnostic guide in cases of cancer of the breast.

In all forms of cervical cancer there is a general induration of the tissue, the normal resiliency and elasticity of which are practically lost. This gives not only a useful palpatory sign, but it is peculiarly noticeable when an attempt is made at dilatation, which demonstrates its firmness and incompressibility in a striking manner. Some surgeons have tried to make use of this peculiar attribute of cancerous infiltration for purposes of early diagnosis, and especially as a means of differentiating between the results of inflammatory and malignant disease—the inflammatory cervix yielding to the dilator and becoming softened under the influence of continuous pressure. The slow method of dilatation (as by the

use of tents) seems better adapted to this purpose than the rapid divulsion with metallic instruments. The use of sulphate of copper was thought by Heitzmann to be a reliable and unfailing aid in the recognition of the incipient ulcerative form of cancer of the cervix. He applied a 10 per cent. solution of this drug to the suspected area, producing hemorrhage in beginning cancerous ulceration, and a bluish-white coating without hemorrhage in cases of simple or inflammatory erosion.

The best evidence that there is no absolutely certain method of diagnosing cancer in its earliest stages, except by the use of the microscope, is afforded by the efforts which have been and are now being made to find some change in the human organism which can be said to be peculiar to the disease. These investigations have been conducted chiefly in the fields of chemical and serological research. Perhaps the most promising serum-test is that of Abderhalden, concerning whom and whose work in the sero-diagnosis of other conditions much has been said and written in recent months. His test has for its basis the premise that when foreign proteins gain access to the circulation, the organism reacts by elaborating a ferment which causes their disintegration or digestion. The same reaction is thought to take place when certain peculiar proteins are derived from the body itself—by autogenesis, so to speak. Elements from the placenta, for example, pass into the maternal blood, and the serum has been shown to be able to digest placental tissue. This change, it is believed, occurs only in pregnancy, and therefore the test for pregnancy is based upon this principle. It has been assumed that in cancer analagous reactions occur, and the experimental digestion of cancerous tissue by the serum of suspected patients, who later have shown unmistakable evidences of cancer, has given much encouragement to those who would attack the disease in its real incipiency.

To discuss the early diagnosis of cancer naturally leads one to consider the various measures which have been proposed for the purpose of restricting or preventing it, as far as possible. Much has been said of late regarding these phases of a great and pressing problem, and I trust I may be pardoned for making reference to them before I close. For the general educational campaign now being waged under the auspices of a number of State and national organizations, both lay and professional, I have only words of commendation. The instruction of the public as to the possible significance of the much-neglected early signs of cancer is unquestionably a step in the right direction, but unfortunately the very classes of society in which cancer is most frequently to be found cannot be reached by newspapers, magazines or public lectures. I believe that the general practitioners of medicine constitute the most important agency in the instruction of the public, and if all of them would take advantage of the many opportunities which come to them to explain the possible meaning of hemorrhage, discharge and pain at or near the time of the menopause,

not only would a decided improvement in the mortality statistics of cancer be effected, but much of the onus and blame which come to them in cases of fatal procrastination would be avoided.

Going further with the duties and responsibilities of physicians, I beg to quote from statements made by Dr. Howard A. Kelly and Dr. William Easterly Ashton, because they so well express the opinions which I have long held, and to which I have frequently given expression. Dr. Kelly, in his Medical Gynecology, published in 1908, has this to say: "In from six to eight weeks after every confinement the medical attendant should see his patient, with the object of making a careful inspection and of noting in his case-book the extent of the traumatism caused by the labor and just what lesions remain. Every woman who has borne children should be examined by a competent physician at least once a year until she is 55 years old. The effect of an adoption of these rules would be prompt discovery of an enormous number of cancer cases in their very incipiency. That such a course would be distasteful to women at large I do not doubt, but who would measure such a trifling sacrifice against the great gain of even a small increase in the percentage operability of this distressing and today largely hopeless class of cases?"

Dr. Ashton, writing in August, 1912, expresses still more pertinent and definite views in the following words: "While nothing is known of the cause of cancer, yet it is a clinical fact that the disease occurs almost exclusively in women who have borne several children, and consequently, so far as our present knowledge serves us, it is important that lacerations of the cervix should be viewed in the light of a dangerous predisposing cause. As a prophylactic measure, therefore, all such traumatisms should be repaired. This is specially true of lacerations which are associated with eversion of the mucous membrane of the cervical canal, cystic degeneration, erosion and hyperplasia of the tissues of the cervix. The obstetrician before discharging a patient after confinement should examine the cervix, and if a laceration is found to be present, it should be repaired within three or four months. It should also be the duty of the general practitioner to examine the cervix of all women who consult him for pelvic symptons and urge a repair operation if a laceration is found. And finally, I would urge, as a routine practice, the examination of every woman over 40 years of age who has borne children and the immediate repair of all lacerations of the cervix that may be discovered. The prophylactic treatment of cancer of the cervix, in my judgment, is most important, and I am convinced that the frequency of the disease could be materially lessened if the general practitioner would educate his patients to appreciate the necessity for repairing cervical tears."

Significant and suggestive as are such statements when made by men of wide experience and acknowledged ability, skill and judgment, I feel that I am fortunate in being able to give them additional value by referring to the work of another surgeon who

has recently spoken not of what *should* be done, but of what *has* been done by him along the lines indicated in the above quotations. Dr. L. M. Bossi, in the Zentralblatt für Gynäkologie of July 5, 1913, says: "The purpose of so-called prophylaxis seems to have been an early diagnosis with the object of timely hysterectomy. This is surgical therapy, not prophylaxis. The aim of gynecologists should be to find the means to prevent the development of uterine cancer. Is this possible? Twenty-seven years of clinical experience sustains an affirmative reply. Remove the predisposing chronic lesions from the cervix and cure by the curette or otherwise the hyperplastic formations of the corporeal mucous membrane. In my experience with 7000 cases in which I have performed plastic operations on the portio vaginalis, I could in none of them, even after many years, establish the development of cancer where it is concededly most frequent. I am sure that in most cases the origin of cancer is to be found in chronic lesions and inflammations (Endometritis, Endocervicitis, etc.) which have been treated in the usual dilatory way, and especially with chemical caustics, whose misuse creates serious disturbances in the tissues. The assertion that cancer has its origin in injuries or lesions, themselves benign, which are not treated in time or in a proper manner, therefore follows. A really humanitarian and clinically scientific work would be a propaganda for the prophylaxis of cancer of the uterus, the basis of which should be timely, systematic and persevering surgical treatment of benign affections of the cervix and uterine cavity."

In the preparation of a suitable address for this occasion I have encountered many difficulties and frequent interruptions. Such as it is, however, I offer it to you with my best wishes for the success and permanency of the Franklin Square Hospital Medical Association. I now have certain more or less clearly defined opinions with regard to the cancer problem which I beg to submit to you in closing. I should be glad, indeed, if by some happy thought or useful suggestion I could aid in an appreciable degree in the warfare against what has been fitly characterized as a national peril.

In my judgment, the Franklin Square, and every other public general hospital in this city and elsewhere, should maintain a well-equipped and properly conducted department of surgical pathology, open to all reputable physicians, who should be encouraged to send specimens for examination, and especially scrapings and sections from cases in which cancer is suspected. I would carry the laboratory idea further, because, for economic if for no other reasons, the organized governments of the State and city, in their respective health divisions, should also provide facilities, likewise available to all licensed practitioners of medicine, for a prompt and authoritative report upon cases of suspected cancer, as they now do so effectively in cases of tuberculosis, typhoid fever, diphtheria and other less serious ailments. Why, for example, should not the functions and duties of the State bacteriologist or

pathologist include reports upon suspected cases of malignancy, especially among the poor? Moreover, it occurs to me that the medical schools, in arranging their curricula, might with advantage give greater prominence to the most advanced methods for the early recognition of tuberculosis and cancer, and that State licensing boards, against whose unpractical examinations much deserved criticism has been directed, should also place more emphasis upon these vital subjects and give greater relative credit to those who show a familiarity with them. What a stimulus this would be to the undergraduate who is preparing to "run the gauntlet" of the examining board and at the same time endeavoring to equip himself for the imminent and important problems with which he is sure to be confronted, even in the beginning of a medical career!

And finally, I desire to state in the most deliberate manner that, in my opinion, humanitarians, philanthropists, social workers and legislative bodies, with money at their command to spend or to appropriate for useful purposes, would do well to divert their attention for a while from public libraries, free drug dispensaries, spasmodic and abortive vice crusades, experimental radium institutes, societies for the promotion of the welfare of lower animals, and other more or less commendable if not always utilitarian projects, and focus it upon the poverty-burdened women of the country who are sadly in need of public maternities, where the most important function of their lives could be safeguarded and conducted with proper care, supervision and environment, in which or from which the subsequent physical welfare of mothers could receive systematic and capable attention, and under the auspices of which the *real* prophylaxis of cancer could be effectively practiced. The establishment and maintenance of nurseries for the care of the children of the poor during the lying-in period would of course be a logical and natural accessory to such institutions, and would do much to promote and facilitate their general use.

THE SURGICAL CLINICS OF JOHN B. MURPHY, M.D., AT MERCY HOSPITAL, CHICAGO. Philadelphia and London: W. B. Saunders. Baltimore: The Medical Standard Book Co. Bi-monthly. Per year, $8. December, 1913.

Here are to be found articles on the production of artificial pneumothorax by the injecting of nitrogen according to the method of Dr. Murphy, bone cyst of the radius, pyonephrosis, ununited fracture of the radius previously plated, transplantation of bone, subcutaneous abscess following tuberculosis of the spine, aspiration and injection of formalin and glycerin solution, undescended testicle in the inguinal canal, etc., and a talk on cholelithiasis and cholecystitis. Certainly this is a feast good enough for kings, and, what is more, is not the rehash of others, but what Dr. Murphy has himself seen and done.

MARYLAND MEDICAL JOURNAL

NATHAN WINSLOW, M.D., *Editor.*

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BALTIMORE, MARCH, 1914

THE CONTROL OF CANCER.

WITH the advance of civilization cancer seems to be apparently on the increase. This increase is apparently a penalty of civilization. As yet in deep-seated malignancy there is only one treatment—surgical. There is no authentic report of a single visceral cancer having been cured by medicinal means. Whether this increase is real or only apparent is a difficult problem to prove, as better means of diagnostication may have played a part in directing attention to the greater prevalency. Again, the lengthening of the span of life may also be concerned to some extent in the apparent greater frequency. At any rate, the profession now thoroughly realizes that no race or age is immune; that certain periods are more dangerous than others; that if the malady is to be conquered it must be gotten early, or, better still, in the precancerous stage, by which is meant the removal of growths from those organs particularly predisposed to cancer before malignant degeneration has set in. Writing along these lines, Dr. Joseph C. Bloodgood, in a paper read before the Clinical Congress of Surgeons of North America, Chicago, November 13, 1913, sounds the clarion note: To improve the results, to increase the number of cures of cancer, there are two factors over which we have control—the duration of the disease and the treatment. Long experience and investigation seem to show that cancer never begins in healthy tissue. There is always a pre-existing local defect which is benign and in which later there may be a cancerous development. When this previous defect is situated on the skin, beneath the skin or on the mucous membrane of the lip, tongue and mouth, everyone is aware of the little lesion. These previous defects or local lesions in which cancer may develop may be called precancerous. The complete removal or complete healing of these precancerous lesions will, in Dr. Bloodgood's experience, accomplish a cure in 100 per cent. of cases; that is, none of these people will die of cancer from a growth in the situation from which the precancerous growth has been removed. Such

cases cannot be called actually cured of cancer, but we can be quite certain that such treatment prevents cancer in many, if not all, of the patients treated. Little tumors which have been present since birth, or noticed later in life, may occur on the skin as warts, moles or nevi, any one of which is subject to cancerous degeneration. A wound, burn or some injury or disease may destroy the skin or mucous membrane, and, not healing, a chronic ulcer result. The wound never heals, or heals badly and then breaks down; the open sore remains for weeks, months or years. At any time a cancer may develop in such ulcer. Cancer may result from some form of chronic irritation of the skin and mucous membrane which does not destroy it, as chronic inflammation about bad teeth. All of these precancerous lesions of the skin and mucous membrane are recognized by their hosts the moment they begin. Delay in treatment is due to ignorance, fear or skepticism. As previously stated, proper treatment instituted in the precancerous stage should result in 100 per cent. of cures. Any treatment which does not completely remove the little tumor or accomplish perfect healing of the ulcer is more dangerous than no treatment at all. The author's investigations over a period of twenty years with almost 3000 cases demonstrates that in cancer in accessible regions good surgery in the precancerous stage should accomplish 100 per cent. of cures, because this early recognition and treatment leads to the complete eradication of the precancerous lesion still benign, or to the recognition of the earliest stage of cancer by the microscopic study of the piece excised, and thus leads to the radical operation indicated at a period most favorable for the cure of cancer. The above dictum also applies to precancerous lesions of the internal viscera, though with the present means at our command these are harder to detect. Certainly here their early eradication would go a long way toward the reduction of cancer incident to the abdominal viscera.

Though much is known about cancer, still much remains to be learnt, and until we are better informed concerning the etiology, the teachings of Dr. Bloodgood are certainly sound. Here, as in other lines of endeavor, an ounce of prevention is better than a pound of cure. A bad-looking mole removed, perhaps a cancer victim saved. Briefly, the only hope the profession has at present of reducing the prevalency of cancer is to educate the populace to the possible danger lurking in lesions prone to undergo cancerous degeneration and advise early and complete eradication. This is Dr. Bloodgood's lesson.

Medical Items.

Official announcement was made January 16 at Johns Hopkins Hospital of the new appointments to the staff for the year beginning September 1. These appointments are made from the graduating class of next June and are coveted plums among the seniors. Two women are included in the list.

The appointments and services are as follows:

Medicine— F. A. Evans, S. Bayne-Jones, J. T. King, Jr., and Miss A. Clark.

Surgery—G. R. Dunn, J. K. Ormond, J. P. Webster and I. Zadek.

Gynecology—Dr. G. W. Corner, L. H. Redelings and H. M. N. Wynne.

Pediatrics—G. A. Batten, M. Flexner and Miss A. S. Rothholtz.

Phychiatry—J. C. Donaldson.

Obstetrics—Dr. D. Davis and J. Webb.

Throat—C. E. Connor.

Dr. J. McPherson Scott has announced the names of those to whom the State Board of Medical Examiners, of which he is secretary and treasurer, has ordered licenses issued as the result of the examination held in December. They are: Clement M. Arnold, Alfred W. Brown, Chas. McT. Campbell, James E. Diehl, William W. Dumm, Samuel E. Enfield, Lyman W. Gaylord, Harry Goldsmith, F. M. Gottschall, Augustus C. Gray, W. Frank Gemmel, Arthur L. Hichew, Leon S. Horka, Garrett L. Hynson, Bernard V. Kelly, Ernest G. Marr, Simon C. Neistadt, Walter Price, Solomon Reina, T. E. Sass, William H. J. Scruggs, Thomas S. Shepperd, Loyal A. Shoudy, Boylston D. Smith, Joseph Sparck, John C. Stansbury, Henry A. Stephenson, John E. Thomas, Cleveland D. Whelchel, Zachariah W. Wyatt.

Dr. William H. Welch of Johns Hopkins University was the chief orator at the installation of Dr. C. R. Holmes as dean of the medical department of the University of Cincinnati, January 16.

Dr. Henry Barton Jacobs, president of the Maryland Society for the Prevention and Relief of Tuberculosis, and Miss McKay Jones, head tuberculosis nurse of the City Health Department of Baltimore, addressed a meeting held in the interest of the cause in the House of Delegates chamber at Annapolis on January 16.

Drs. Randolph Winslow, Frank I. Martin and J. M. T. Finney attended the 26th annual meeting of the Southern Surgical and Gynecological Association Convention in Atlanta, Ga., December 16-18, 1913. Dr. Finney read a paper on cancer, which was received with much enthusiasm.

Dr. S. T. Nicholson, Jr., superintendent of Sydenham Hospital, has resigned his position, to take effect March 15.

Dr. Carl von Noorden, Jr., and Dr. George Minot have been appointed to the Johns Hopkins Hospital Staff.

An X-ray department and pathological laboratories have just been concluded at the Church Home and Infirmary, both of which improvements were badly needed. Especially is this true of the X-ray department. Formerly patients at the hospital who had to undergo X-ray treatment were obliged to go to Johns Hopkins Hospital for it.

Dr. John I. Macht, Johns Hopkins Medical School, '06, of 1511 Madison avenue, has been re-elected president of the Jewish Academicians of Baltimore.

A fire in the office of Dr. Myer W. Aaronson, 1710 Linden avenue, caused damages estimated at more than $1000.

A maternity hospital, completely furnished, has been given as an adjunct to the Hebrew Hospital and Asylum by Abraham Mendels, a retired merchant of this city, as memorial to his two late brothers. Work on the building will begin immediately.

At the regular semi-annual meeting of the Prince George's County Medical Society, held Saturday, January 10, 1914, the following officers were elected for the year 1914:

President—H. B. McDonnell, M.D., Physicians and Surgeons, '88, College Park, Md.

Vice-President—J. C. Coggins, M.D., Physicians and Surgeons, '96, Laurel, Md.

Secretary—S. M. McMillan, M.D., Howard University School of Medicine, Washington, D. C., '90, Riverdale, Md.

Treasurer—W. A. Griffith, M.D., Physicians and Surgeons, '09, Berwyn, Md.

Delegate—L. A. Griffith, M.D., Physicians and Surgeons, '79, Upper Marlboro, Md.

Alternate—H. B. McDonnell, M.D., College Park, Md.

Dr. Charles Bagley, Jr., University of Maryland Medical School, '04, announces that he has resumed practice in Baltimore. He is located at 5 W. Chase street. For the past year

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Dr. Bagley has been first assistant to Dr. Harvey Cushing, chief surgeon of the Peter Brent Brigham Hospital at Boston, Mass.

Dr. John B. Bay, secretary of the American Otological Society, announces that the annual meeting of the organization will be held at the Hotel Chelsea, Atlantic City, N. J., May 27 and 28, 1914.

Dr. Lewellys Franklin Barker, Professor of Medicine, Johns Hopkins University, of 1035 Calvert street, Baltimore, Md., has been elected one of the directors of the Alpha Omega Medical Scholarship Society.

The 1914 annual session of the American Medical Association will be held at Atlantic City during the fourth week in June. The House of Delegates will convene Monday, June 22nd, and the Scientific Assembly, Tuesday, June 23rd.

The following are the officers of the local Committee on Arrangements: William Edgar Darnall, chairman; E. C. Chew, treasurer, and Henry T. Harvey, secretary.

The chairmen of sub-committees are: Finance, George Scott; Entertainment, William J. Carrington; Section Entertainment, W. E. Jonah; Hotels, Thomas D. Taggart; Halls and Meeting-Places, Walt P. Conaway; Section Meeting, Byron G. Davis; Programs, C. Coulter Charlton; Printing, Walter Reynolds; Badges, E. H. Harvey; Scientific Exhibit, I. E. Leonard; Registration, William Martin; Information, Richard Bew; Alumni Entertainments, Joseph C. Marshall; Post-Office and Telephones, C. Garrabrandt; Commercial Exhibit, E. Guion; Ladies Committee, Mrs. E. H. Harvey.

MARRIAGES.

Branch Craige, M.D., University of Maryland Medical School, '09, to Miss Else Betty Kohlberg, both of El Paso, Tex., at El Paso, January 21, 1914. After a short wedding trip, Dr. and Mrs. Craige will reside in El Paso, where the groom is practicing his profession.

William Edwin Gallion, Jr., M.D., University of Maryland Medical School, '12, of Darlington, Md., to Miss Sarah R. Rites of Arlington, Md., at Danbury, Conn., July 25, 1913. Dr. Gallion was a resident physician at the University Hospital from 1912-1913.

Charles Willis Larned, M.D., University of Maryland Medical School, '93, to Miss Cornelia Lee Pattison, both of Baltimore, Md., at Baltimore, February 2, 1914. Dr. Larned is an instructor in the Johns Hopkins Medical School and a member of several leading clubs.

James B. Holmes, M.D., of 13-15 E. Read street, to Miss Rosalie Seddon Rutherfoord of Roland Park, at Baltimore, Md., January 31, 1914.

Charles E. Clark, M.D., of Olean, N. Y., formerly house physician at the Maryland Homeopathic Hospital, Mount street, Baltimore, Md., to Mrs. Rosa A. Baum of Baltimore, at Baltimore, January 19, 1914. Dr. Clark graduated from the Hahnemann Medical College, Chicago, Ill.

Charles Birdsall, M.D., Physicians and Surgeons, '83, to Miss Myrtle Wilkes, both of Lonaconing, Md., at Lonaconing, January 21, 1914.

Clarence Irving Benson, M.D., University of Maryland Medical School, '09, of Port Deposit, Md., to Miss Mattie E. Benson of Philadelphia, Pa., at Philadelphia, February 11, 1914. Dr. and Mrs. Benson will spend their honeymoon in Bermuda.

Charles Alan Laubach, M.D., professor of hygiene and bacteriology at Johns Hopkins Medical School, to Miss Natalie Trotter Usher of Baltimore, Md., at Baltimore, December 17, 1913.

Joshua Rosett, University of Maryland Medical School, '05, to Miss Louise Carey, both of Baltimore, Md., at Ronceverte, W. Va., February 7, 1914.

DEATHS.

Thaddeus W. Clark, M.D., University of Maryland Medical School, '80, of 10 W. Hamilton street, died at the home of his brother-in-law, 58 W. Biddle street, February 14, 1914.

Mrs. Sophia Thayer, mother of Dr. William S. Thayer, professor of clinical medicine, Johns Hopkins Medical School, of 406 Cathedral street, died at her home in Cambridge, Mass., January 24, 1914, after a lingering illness.

Mrs. Viola Struven Fehsenfeld, wife of Dr. Arthur L. Fehsenfeld, University of Maryland Medical School, '09, died of blood poisoning at her home, Garrison and Fairview avenues, Forest Park, February 6, 1914. Dr. Fehsenfeld is assistant in neurology at the University Medical School.

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HYGIENE OF RURAL SCHOOLS.*

By J. A. Nydegger, M.D.,
United States Public Health Service, Baltimore, Md.

SANITARY laws in great numbers have been enacted and enforced for the betterment of the complex health conditions of our cities. Extensive public-health educational campaigns have been carried on in all that pertains to health and hygiene; and in the onward movement which at the present time is being agitated more than in any former period in behalf of better methods of living, physically, mentally and morally, with the great advances made in hygiene, eugenics an euthenics, the rural and urban districts, which now offer the most fruitful fields for the promotion of hygiene, in all the term implies, seem in a great measure to have been overlooked and practically passed by, and up to the present time almost forgotten. This has been due in a measure to the engrossing attention paid to improving health conditions in the cities and large towns, while the rural areas have been sadly neglected.

Other factors of importance in this connection are the remoteness of some of the sections from the more populous cities and environs, and partly through lack of knowledge and ignorance of the existing injurious environment, in so far that the rules for correct living and good health have been almost completely ignored.

In further explanation of the backwardness in the rural hygienic movement, it might be said that the non-investigation into the true status of health conditions in rural areas more thoroughly has not been intentional on the part of the sanitary and health officials of any State, but partly follows as a result of the lack of interest and knowledge concerning these matters of the inhabitants themselves. What will apply as a whole to the tardiness in advancing better hygienic and health conditions in the

*Address presented at the Fourth International Congress on School Hygiene, held at Buffalo, N. Y., August 24-30, 1913.

rural communities of the majority of our States will likewise apply to any particular environment in which the population in these areas might happen to be placed.

How frequently do we hear the assertion made by statesmen and others that the country district school is the foundation of the republic, the bulwark of the nation, and yet how little has the nation apparently done for the public schools of the rural communities! In the cities and larger towns the schools are, as a rule, fairly well administered, and the buildings fairly well constructed and equipped, in accordance with hygienic measures, but how about the sadly-neglected rural schools? When we come to consider the subject of school hygiene, this is one of the supreme questions of the hour, as I take it.

When we fail to respond to the call for more modern schoolhouses in the rural areas and better-equipped and better-paid teachers, we fail in a great public duty.

The claim that the children in the country districts are entitled to just as well lighted and heated buildings, to just as habitable, modern and sanitary schools as are the children of the cities and towns, is a just one, and the demand must be met if we would heed the call of progress and justice.

Every American child is entitled to a free common-school education, and where the rural communities cannot properly provide and support their schools, the State and Federal Governments should see to it that better provisions for the rural schools are provided.

It is highly important for us to understand that schools are provided for that part of our population which is peculiarly susceptible to the influences of bad hygienic surroundings. It is now a well-recognized fact that the hygiene of school life is of paramount importance in connection with the subject of political economy and the prosperity of a nation.

It is also highly important that those who are in any way connected with the education of the young should have uppermost in mind that the greatest asset or resource of a nation is its healthy citizen, and that unless we provide better and more modern and sanitary schools in the rural districts we cannot expect the children of these communities to grow up into healthy citizens, and a citizen without good health is a non-valuable quantity when resources are being considered. As a people, we spend comparatively little money on the conservation of health, our greatest national resource, while vast sums are expended for other public purposes of lesser importance.

In the little white, one-roomed country schoolhouse many of our greatest men began and completed their school education, yet there can be no doubt that there were others who would have been great but for the undesirable environment and limitations of the country school.

It is a sad fact that the schoolhouses in many of our rural communities are far from sanitary, and that the work imposed upon

the teachers, who are chiefly women, is greater than they can perform without endangering their health.

The majority of the rural school children spend from 20 to 30 hours weekly in the schoolroom for a period of several months each year for 8 or 10 years. Such being the case, the need of hygienic schools and environs and a good personal hygiene must be admitted by all.

Formerly we were taught that the country is more healthful than the city, and we accepted this without comment, but recently the sanitarians have called attention to the fact that the death rate in the cities is falling more rapidly than in the rural districts. The cause of this is simply a matter of sanitation. While sanitary and hygienic provisions have been made for the cities, the urban and rural areas have been sadly neglected. When the country was first settled the population was scattered, and the virgin soil was not polluted; the waters were pure, and many of the contagious diseases which now claim thousands were practically unknown.

If we but compare the existing unhygienic condition of the average rural school with that of the schools of the cities, the contrast will be shown to be all the greater. How often do we see—especially those of us who are somewhat more familiar with rural life and rural conditions—the district school located at some one or other extreme limit of the school district, placed there, doubtless, more to please some influential trustee or patron or because of a stronger local faction, rather than being placed centrally, where it would be equally distant and accessible to all, thereby lessening the hardships, fatigue and exposure in inclement weather imposed on the children who attend from the more distant parts. Again, on the aforesaid grounds, as also by reason of ignorance of the laws of hygiene, how frequently do we see the rural school located at some unhygienic or badly-oriented spot.

Occasionally do we see the school placed on low ground, where drainage is poor, or where the ground water is near the surface, or perhaps it is seen surrounded and overhung by trees, which are conducive to moisture and insufficient sunlight, or it is situated at the base of a hill or eminence, thereby depriving the building of the proper amount of light, as also affording an ill-pleasing view from the windows.

The filth and foul air of the toilet-rooms of many schools in decent urban and town communities is unspeakable, but if we venture into the more remote rural districts we are wont to observe the total absence of this important sanitary accommodation of the school, and the scholars, responding to the daily calls of nature, must make use of the privacy afforded by natural objects and otherwise in the vicinity of the building, with necessarily resulting soil pollution and the liability of the dissemination of disease germs contained in the excreta deposited on the ground. In this manner pathogenic germs may easily gain access to the

source of supply of drinking water for the school. The dangers of the drinking water are thus twofold: from the impure water and from the common drinking cup, in transmitting disease, still in common use in the rural school.

The water supply of the rural school generally comes from a surface spring or shallow well. The former, if free from pollution, is frequently made inaccessible by reason of the distance necessary to transport the water, with a resulting deprivation in the amount supplied for drink and purposes of cleanliness in the personnel of the school, their effects and the building itself. Drinking water coming from a shallow well is more dangerous than from a spring, as it is located near the school and is more liable to receive surface drainage from the vicinity of the building, and therefore is more likely to be polluted and its use a greater risk to health.

When we come to consider the rural school itself, the lack of cleanliness is perhaps the most glaring and universal defect, being worse frequently in this respect than the school in the city, while also it is generally found to be poorly constructed and imperfectly heated, ventilated and lighted. The average country schoolhouse is usually a one-room affair, with thin walls and thin floors, with cloakroom, washroom and schoolroom combined in one, with emanations from unwashed bodies and soiled clothing and collected gases tainting the atmosphere. No vestibule or anteroom is provided, and the single door, opening directly without, assists in making the heating of the country school a *question.*

This is generally done by stoves, and in cold climates is as unsatisfactory a method as possibly can be imagined. The floors are always cold, and the children suffer cruelly from chilblains and colds. While the upper part of the room is too warm, the outer row of seats is in an icy atmosphere, and the whole room suffers from bad air. How many of us here recall the cold and cheerless mornings of our early school days, when the wood stove failed to draw, and smoked—and the frequent sorties of the scholars in search of better fuel to make it burn?

The floors in rural schools are covered with dust, as are also the walls and furnishings, and, while the floors are scrubbed once or oftener a year, were it not for the vacation interim doubtless a number of pupils would not escape serious illness thereby, though perhaps the country school's lack of cleanliness is less harmful on account of the presence of better air and more sunlight than in the cities; but the cold floors, poor ventilation and lighting and absence of all toilet conveniences make them extremely uncomfortable and often unsanitary. The improper ventilation and lighting of these schools frequently justly call for words of extreme criticism on the part of the hygienist. What provisions do we see made for the proper ventilation of the schoolrooms of the rural communities? To nature is entrusted this all-important function. Foul air must find its egress from the room *per via naturalis,* as also must fresh air gain ac-

cess in the same manner. To supply these defects in construction windows must frequently be raised or lowered and doors thrown open when the air becomes overcharged with accumulated gases or the room overheated, as frequently happens, thereby resulting in exposure of the scholars to cold drafts, with consequent detrimental effects on health. Also do we see many rural schools where the lighting is totally inadequate. Either the building is not properly oriented so as to receive the maximum amount of sunlight throughout the day, or the windows are improperly placed or insufficient in number and size, with the resultant detrimental effects on the eyes of the scholars, leading to eye strain, headaches and other discomforts and eventually impairing visual acuity.

The lack of systematic medical inspection of rural schools is also a matter of crying need. While this excellent method of eliminating the danger of transmitting contagious diseases from among school children in our cities and some of the larger towns is being extended and improved, as also the relief of faulty health conditions in the children themselves, which would interfere with their progress, physically and mentally, and frequently would eventually lead to serious disorders, the rural and urban schools are practically totally deprived of this valuable service. The recent wonderful awakening on the part of the State Boards of Health and the State Boards of Education and the Federal authorities in respect to this point in certain sections of our country cannot be praised too highly. The initiative in solving this particular phase of rural school needs seems, therefore, to have been taken, but time will be required for the development of public sentiment along this line among the rural people and for the passage and enforcement of State and local laws providing for this much-needed inspection.

The common drinking cup, the common towel, the badly constructed, placed and kept blackboard and the common tin washbasin all will be found still to fill a prominent part in the equipment of the rural schools in many communities, and two of these at least play well their part in the spread of disease among the school children.

Many other subjects which have an important bearing on the promotion of hygiene of the rural school, such as providing proper and sanitary playgrounds, proper toilet rooms, the proper care of schoolrooms, equipment with proper furniture, providing baths, lunchrooms, shortening of the long school hours, the color of the walls with respect to light, the prevention of certain games played by children with the view of preventing the spread of disease through osculation, and others, might well here be discussed, but time will not permit.

Having dwelt upon the insanitary and unhygienic condition of the rural schools, naturally the question is asked, What is the solution of this whole problem? The answer is education in public health matters and the adoption of a State-wide policy

of improved health and hygienic measures. The splendid health organizations in force in some States, cities and large towns only need extension and increased scope of action to include the rural districts in all their beneficial operations, while others need to have health departments organized and put on a proper footing of efficiency. Many of our rural public-school hygienic problems are difficult of solution, and will require the outlay of much time, talent and money. The latter is not always forthcoming from the State Legislatures, but with it in hand the other two can be obtained.

If the rural communities cannot properly support their schools, it would seem but proper to maintain that the State or Federal Government should do so. We know the States are limited to the amount of money they can raise by direct tax, while the Federal Government, by indirect taxation, can provide, without in any way embarrassing its efficiency; and the farmers, who hold the balance of power, should see that they are made and the funds thus released used for the betterment of the country schools.

As has been said, what is most needed to improve and promote the hygiene of the rural schools is the arousing of public interest in all matters pertaining to hygiene and health in these communities. This can be accomplished effectively in one way, and that is by education of the public, by lecture campaigns, talks, traveling exhibits, by State Boards of Health and Education, by the school teachers trained in detecting the contagious diseases in school children, and other interested organizations and individuals, and the district school nurse.

Under this head the Federal Government, working in conjunction with State health and education officials in establishing model schoolhouses, with model equipment, playgrounds and toilet rooms, etc., adapted to the needs of the several rural communities, these to be used as standard types of buildings for similar purposes in the future, would find a field of great usefulness and great public benefit, thereby making good the oft-quoted statement that the rural school is truly the foundation of the Republic, in that it aims to conserve the health of our school children, our greatest national resource, by improving the sanitary conditions surrounding the country school to a point where it will not form, as it forms today, the great disease-spreading center for rural and semi-rural communities.

By these methods it is believed modern schoolhouses, as well lighted and heated and as habitable and well-equipped as those in the cities, can be provided in the rural communities at no great increase in cost; and in this manner it is believed that all residents of such districts can be reached and interested and instructed, and be brought to realize that life can be conserved and prolonged by observing certain and not difficult hygienic rules for the schools, thus insuring increase of health and happiness, and in the end greater prosperity in any community.

THE SITTING POSTURE IN THE PUERPERIUM.

By William Sisson Gardner, M.D.

For many years I have been interested in the influence of the posture of the patient during the puerperium, at first as to the effect of the posture on infections, and later as to the results in the absence of infection. As early as 1885 I observed the great benefit derived from the sitting posture in certain forms of puerperal infection. At that time in the old Maternite, on Lombard street, we had many more cases of infection after labor than are seen in similar institutions at the present time. I very soon learned that what we call the sapremic form of puerperal fever was promptly benefited in nearly every case by taking the patient out of bed and placing her in a reclining chair.

From the observation of these patients I came to look upon the sitting posture as a prophylactic measure. I discouraged the too-long continuance of the prone position and encouraged the patients to sit up in bed a part of the time soon after labor. The nurse was instructed to allow patients to rise for the evacuation of the bowels and the bladder and to prop the shoulders high up on pillows for a part of each day. From this it was but a step to allow patients to sit up in chair for a few hours.

This is a matter of such great importance and is so diametrically opposed to our thoroughly-ground in ideas as to the proper management of the puerperium that I thought that a copious abstract from a paper by Mullerheim on this subject, with a few comments by myself, would serve to again attract attention to this subject.

Mullerheim in his paper upon the early getting up of lying-in women gives his own views and reviews the work that has been done in this line in some of the larger German clinics. He states that the old method of treating patients after labor by keeping them confined to bed for a long time and giving a very limited diet was at least of no advantage to women who were otherwise in good health. The lack of exercise reduced the capacity of the voluntary muscles and diminished the heart action, causing a sluggish circulation, which is prejudicial to all the organs of the body. Hegar recognized the defects of this system and ordered gymnastic exercises to be given so long as the patient is confined to bed. These exercises consist in raising the body from the bed to a sitting position, at first with the help of the hands and afterwards without them. He found that this physical exercise was beneficial even to those that had received definite injuries as the result of interference in difficult labors. When the muscles of the floor of the pelvis have been damaged Hegar advises the voluntary exercise of the pelvic muscles. In these cases he advises the voluntary exercise of the perineal muscles several times a day by producing

the same muscular contractions that take place in attempts to retard the stool. Brandt recommends the same exercises and also the changing of the position of these patients in bed, and states that the knee chest position has a very beneficial influence upon the injured muscles of the floor of the pelvis, especially the levator ani. Both Brandt and Hegar advise definite leg exercises, which they think have an effect upon the muscles of the floor of the pelvis. The limbs are exercised actively and passively and a light massage is used.

In the effort to better the lying-in period Kustner went a step farther in having the women get up a few days earlier after delivery than had been the custom. We know that women of the working class get up on the day after labor without suffering any immediate injury. We hear also of the getting up of many women among uncivilized people immediately after labor. For years it has been the custom after an operation on old people or those suffering from bronchitis to place them in a sitting position as soon as possible to avoid the danger of hypostatic pneumonia. Kustner may have had a similar idea when, 30 years ago, he made his first experiments with the early getting up of women after labor. He put this question to himself: Is a long lying-in period serviceable to healthy women? After his clinical examinations he came to the conclusion that the early leaving of the bed does no harm; that the patients do not have fever; that they do not have prolapse or retroflexion of the uterus; indeed, that the early getting up is not only not detrimental, but has its definite benefits. The involution of the uterus progresses more rapidly; defecation regulates itself easily and without the use of laxatives. In consequence the appetite improves more rapidly, urination is spontaneous and the use of the catheter is avoided. The overfilling of the bladder, which promotes prolapse of the vaginal wall, does not occur; but the greatest benefit from the early getting up is the early exercise of the muscles of the body and the support which the circulation and the heart action receive through it. Kustner, in his clinical experiments, made a careful selection of his patients and eliminated those who, during delivery, had received injuries to the vestibule, perineum, vagina and cervix. He also eliminated those that came into the hospital already infected and those who had an active gonorrhea; also those that had been delivered by instruments and those whose labors, while spontaneous, were prolonged. In general, his patients were allowed to get up on the third or fourth day, and some as early as the second day. At first they were allowed to get up for one hour only, but gradually the length of the time sitting up was increased, so that on the fifth, sixth and seventh day they were out of bed all the time. A T-bandage was then put on and they took charge of the child themselves. Under the condition that the labor and the lying-in period be under the control of the physician, he holds that the carrying out of these measures in private practice is practicable.

From Bumm's clinic in the Charite in Berlin it is stated by E.

Martin, Jr., that women, without regard to the number of previous births and ages, are allowed to get up from 15 to 24 hours after labor. The exceptions to this rule are only such women as have had prolonged labor, rise of temperature; have received lacerations; who have had operative interference, or those that have some pathological condition of the heart, lungs, kidneys or blood-vessels, and those infected with gonorrhea. The getting up consists in sitting quietly out of bed and not walking around. Before the patient is allowed to get out of bed a tight abdominal bandage is put on. The following day she is allowed to be out of bed two hours in the forenoon and two in the afternoon. Martin speaks enthusiastically of the rapid involution of the uterus, which, by the seventh day, is about the size of a small fist; is anteflexed; never retro-displaced. He also mentions the easy emptying of the bladder and bowels and the rapid general improvement. The influence on nursing is not stated. The quiet sitting up of the patient is looked upon as a light exercise which has a tendency to more rapidly build up the tissues than when the patient remains on her back without exercise. Martin advises that great care should be exercised; that only those women be allowed to get out of bed early who have no pathological condition present, and these must be kept under careful medical supervision.

Pfannenstiel broadened the indications for early rising. He includes such cases as have had the forceps applied or have had a version done; also severe postpartum hemorrhage was no contraindication. As contraindications he mentions septic and gonorrheal infections or suspended infections; severe instrumental cases, with severe injuries to the birth canal; prolonged labor, with much pressure and severe lacerations of the perineum. On the first day greater freedom of motion in bed is allowed than formerly. The patient was prepared for getting up by gymnastic exercises. From the first day of her lying-in, while lying on her back, the woman was instructed to draw in the abdominal wall as deeply as possible about ten times. She was to repeat this exercise four or five times a day. She followed this by bringing the body to the sitting posture in bed first with and afterwards without assistance. Afterwards, while in a reclining position, she was instructed to rotate the separated, outstretched legs as an exercise for the muscles of the floor of the pelvis. Out of bed the trunk is exercised by flexions and turning from side to side. These exercises should be taken carefully and without violence. When the woman first gets up she is allowed to sit in a comfortable chair for half an hour, after which she takes a few steps back to bed. On the following day she can, both in the morning and afternoon, sit up out of bed and walk a few times up and down the room, and on the fifth day she can remain up six hours. After the midday meal she remains quiet for two to three hours. When out of bed she wears a broad linen bandage. Of 100 patients 3 were allowed to get up on the first day, 61 on the second day, 19 on the third

day, and 18 on the fourth day. Of these 90 pursued the usual course. A few times the patients were obliged to return to bed on account of weakness, profuse lochia, pain in the region of the thighs, irregularity of pulse or giddiness. In the latter case it was on account of myocarditis. Ten of these patients who had arisen early had a rise of temperature, seven had a fetid lochia, and of these seven two had cystitis. Two patients had infections of the breasts, one angina, two fainting spells. Of the latter one was a very weak woman, who lost 1500 cm. of blood postpartum, and the other a girl who, during her pregnancy, fainted daily. He emphasizes the fact that the resistance to cold and infection are increased and that through the upright position the lochia is improved and the ascension of the lymph in the uterus is retarded. A good tone in the abdominal wall and the exact closure of the introitus is observed. The body of the uterus is drawn strongly forward and the cervix moves back between the sacro-uterine ligaments. In this way the vagina is made tense and stretched backward. The stretching of the vagina in connection with the plane in which the vagina is thrown prevents the descent of the uterus. The general condition of the patients improved rapidly. This was especially noticed in women who had had severe postpartum hemorrhages. After six or seven days one can scarcely recognize that the patient has been recently confined. Women who have had several children declare that after previous confinements they were not so well and did not recuperate so rapidly as they did when they were allowed to get out of bed early.

Kronig considers anemia, general weakness, heart disease, varicose veins, definite and threatened infections as especially strong indications for getting the patient out of bed as early as possible. In the Friburg clinic he has made the most extensive and courageous changes in the management of the lying-in period. This consists in getting the woman out of bed eight hours at the earliest postpartum. Through the administration of scopalamin and morphia he relieved the labor pains in about 80 per cent. almost completely. After this he found that the patients were so well that he met no objections when they were ordered to leave the bed eight or ten hours after labor. He considers that gymnastic exercises are important in the promotion of involution. These consist essentially in lifting the body repeatedly and in the exercise of the glutei and abductor group, which tend to stiffen the floor of the pelvis. After eight days he adds to this treatment hot and cold baths with massage. It is very easy to see the improvement in the general condition of these patients over what is was under the old regime. Still clearer is the influence upon the morbidity. The ones who get out of bed early less seldom have fever than did those who formerly stayed long in bed, and this improvement in the morbidity was obtained without any disinfection of the internal or external genitals. Thromboses and emboli have decreased among those who get up early and the ability to nurse has been

improved. The early rising from bed does not increase the tendency to retrodisplacements and prolapse of the vagina, as has been stated, but even has a tendency to prevent it. Up to the present time too much importance has been attached to the ability of the uterine ligaments to prevent prolapse. Since the investigation of Tandler and Halban it has been proved that the essential cause of prolapse is the insufficiency of the muscles of the floor of the pelvis. Methodical exercises will best counteract this weakness.

Mullerheim confesses that in the beginning he was doubtful about the value of these new methods of treatment, but under the influence of Martin he has changed many things in his methods of treating lying-in patients. In suitable cases he uses the gymnastic exercises and gets many of his patients out of bed earlier than formerly. He has also discovered a way by which the weaker patients to whom the getting out of bed is rather too strenuous can get something of the advantage of the sitting position. He accomplishes this by the use of a bed, the mattress of which is fixed at a point near the middle, but the upper half can be elevated in such a way as to put the patient in a sitting position without otherwise disturbing her. She is comfortable and not disturbed by moving. In opposition to the opinion of others, he holds fast to the idea that patients who are running a temperature must not be included among those who get up early, not only until the cause of the rise of temperature is determined, but also until the fever has entirely disappeared. He thinks that the value of the exercise in bed is not to be doubted, but it is not certain whether the exercise should be begun as early as the first or second day.

Stroganoff* bases his conclusions on the study of 8000 cases in his hospital at St. Petersburg. He has found that his patients do better when they get up on the third day, or sometimes, in the case of the primapara, on the fifth day. The upright position favors the discharge of the lochia, stimulates the action of the bowels and bladder and prevents fecal absorption. Gain in weight begins quicker on account of better appetite, and the involution of the uterus is hastened and backward displacement is prevented by the erect position.

It is very clear that the German clinicians have not come to any unanimous conclusion as to how early lying-in patients should leave the bed or what class of patients should be exceptions. It is clear that a great advance has been made and that in the future the lying-in period will not only be more comfortable, but attended with less danger. We may not be able to agree with Kronig that a patient can with benefit leave the bed eight or ten hours after labor, but we must admit that he has demonstrated that no particular harm results from it.

I confess that I cannot understand the position of Mullerheim and others who insist that patients running a temperature above

*Stroganoff: "Shorter Lyin-in Period Recommended." *Monat. f. Geburt. und Gyn.*, Berlin, December, 1912.

normal should be kept in bed. Infections during the puerperal period, without going into details, can be divided roughly into two groups; those in which the infection has not extended as far as the peritoneum, and those in which the peritoneum is involved.

From my own experience and from that of many others it is known that drainage is the essential therapeutic measure in the first group; that the surest way to procure drainage is to take the patient out of bed and place her in a comfortable chair. For many years now I have regarded the sitting posture as the most important part in the treatment in these cases, and in the majority of instances is the only treatment used. It will be of no particular value to rehearse the histories of individual cases. Many physicians are timid about taking a patient out of bed who is running a high temperature. As a fact, the higher the temperature is the more erect the patient should sit and the longer time she should be kept up. In other words, when drainage is most demanded, improve the possibilities of drainage to the utmost.

In the second group of puerperal infections, or those in which the peritoneum is involved, a seemingly different problem is present, but the same principle holds good. In septic peritonitis, due to an infection from any source, the first step in the modern treatment is to put the patient in a sitting posture. The efficiency of the sitting position in the treatment of peritoneal infections originating above the brim of the pelvis has been on trial so long and has so many of our ablest observers to confirm its results that its value is no longer doubted. Now, if the sitting posture has been found beneficial in infections of the peritoneum originating above the brim of the pelvis, we would reasonably expect it to be even more efficient in the infections that begin within the pelvis. As a matter of fact, any form of puerperal infection is benefited by putting the patient in the upright position.

In those cases in which the peritoneum is involved there is much less tendency for the infection to spread to the general peritoneum. The localized infection, however severe, can, as a rule, be successfully dealt with, either by waiting for resolution or by drainage, according to the changes that take place as a result of the infection.

In those cases in which the peritoneum is not involved, drainage, the only remedy of value, is promoted.

The following conclusions are conservative:

I. The actual time of continuous confinement to bed after a normal labor can be materially shortened with distinct advantage to the patient.

II. The patient must be made to understand that the early getting up means sitting quietly in a comfortable chair and that she is not out of the charge of the physician.

III. Regular exercises that throw into use the muscles of the abdominal wall are of undoubted value.

IV. Retrodisplacement, prolapse of the uterus and cystocele do not result from early sitting up postpartum.

V. Patients suffering from puerperal infections in all forms are benefited by the upright position.

VI. Lacerations of the perineum and injuries to the lower segment of the uterus are not contraindications for early rising after labor.

6 W. Preston St.

THE WHITE SLAVE CONGRESS AND ITS LESSONS.*

By O. Edward Janney, M. D.

FIFTEEN years ago victims of the traffic in women became so numerous in Europe that a movement for its suppression was inaugurated at a congress held in London. Last June the Fifth International Congress was held, again in London, those intervening having been called to meet in cities on the Continent.

During the interval of fourteen years between the two congresses in London all of the countries of Europe, except Turkey, had organized associations for the suppression of the traffic. All of these associations had delegates at the recent Congress, as also the United States, Canada, Argentina, Australia, Brazil, Chile, Egypt, South Africa, China and Japan, numbering about 500.

The personnel of the congress was interesting, as each country seemed to send its best citizens, while the government of England was represented, and many of the ruling class of Great Britain took an active part.

This fact was important, in that it showed that the movement for the suppression of the traffic was considered important and extensive enough to justify such countenance. This was made still more emphatic through a personal message from the King and Queen, encouraging the congress in its work. Messages of similar import were received from royal personages in other countries, and President Wilson sent a cordial letter.

Every evening and two afternoons during its sessions the members of the congress were entertained by some of the most influential people in London, including the Duchess of Albany (aunt of the King), the Earl and Countess of Aberdeen, the Duchess of Marlborough and Lord Strathcona. The recognition of the value of the movement for the suppression of the traffic thus accorded by this class will have weight throughout the world.

The lessons derived from the congress were varied and important. In the first place, proofs of the presence and extent of a traffic in girls and women in all countries and between countries

*Abstract of address before the Roland Park Woman's Club, January 15, 1914.

were offered in abundance. It was made clear that while real slavery exists in many localities, with restraint of personal liberty, the most common form of slavery is that in which a man obtains control of one or more women and takes from them their earnings. Even the ordinary form of social vice constitutes a variety of slavery, since the victim is restrained from seeking some other way of living by the difficulty of obtaining decent and pleasant employment.

Another lesson, presented most forcibly by many speakers, was the iniquity and uselessness of the European system of regulation of social vice through police supervision. The necessary accompaniment of this system, a special police force to carry out the reglations (police des mocurs), has proved to easily become the ally and even the agent of the traffickers, thus encouraging the traffic in women. It has also been proved to be a source of oppression to the poor and friendless. The enforced medical examination of women, while useless as a means of preventing the spreading of venereal disease—as acknowledged by its advocates—is causing strenuous opposition on the part of many influential men and women and is losing friends even among the authorities. The example of Great Britain, which has no "regulation" and yet has less disease and better moral conditions than the Continental peoples, is exerting marked influence throughout Europe, which will inevitably soon adopt England's method of persistent repression of social vice. Personal study of the streets of London at night last summer made it clear that a remarkable improvement has occurred, even during the past few years, in the disappearance of soliciting and the absence of immoral women. It was reported to the Congress that Holland and Denmark had followed England's example in repudiating all forms of regulation. This is true also of Switzerland, with the exception of the city of Geneva.

At the congress many speakers referred to the important causes leading to the traffic in women. Among these are the double standard of morals, since on the Continent of Europe the virtue of men is believed in by very few; the lack of education on the part of parents, teachers and physicians as to sex matters and the dangers of social vice; the inadequate laws and the lack of enforcement of law; the long hours of work of women, together with insufficient wages; the desire on the part of many men and women to make money at any cost to others, and the feeble-mindedness of many girls and women who easily become victims and then take up the immoral life.

Some of the constructive work of the congress was to advise:

I. International legislation to prohibit employment in theaters, concerts, circuses and music halls of children under 16 years of age.

2. The appointment of an official commission by each government, consisting in part of women, to ascertain the extent of the traffic in women in that country, the causes leading thereto, and to

report thereon with recommendations as to the best means of suppression.

Also a commission to study the subject of emigration and the transportation of immigrants by means of steamships and railways.

3. The better control of employment agencies.

4. That more care be exercised over the use of the General Delivery windows in postoffices.

5. That the employment of women on the police force be encouraged.

6. That laws for the suppression of the traffic in women be strengthened and rigidly enforced.

The next congress will meet in St. Petersburg in 1916.

Book Reviews.

PRACTICAL SANITATION. By Fletcher Gardner, M.D., and James Persons Simonds, B.A., M.D., St. Louis. C. V. Mosby Co. Price $4 net. 1914.

For review see editorial.

MARRIAGE AND GENETICS. Laws of Human Breeding and Applied Eugenics. By Charles A. L. Reed, M.D., F.C.S., Fellow of the College of Surgeons of America; Member and Former President of the American Medical Association; Professor in the University of Cincinnati. Cincinnati: The Galton Press. 1913.

Eugenics, whatever our attitude toward the movement, have come to stay, so the profession might just as well begin now to take the doctrines seriously as later. Anyone who has been connected with the gynecological service of a large metropolitan hospital recognizes that our present standard of double morals works an injustice and hardship upon the female member of the human race. If it were only possible to collect all of the cases of females operated on for pelvic diseases due to diseased husbands, the profession would indeed be astounded. The right of bearing children is a God-given privilege which every woman has the right to expect to be conserved to her. It is a well-recognized fact that thousands of barren marriages are due to gonorrheal-infected tubes, of which the possessor is unaware, thinking her malady to be a punishment of married life. It is, therefore, right and proper that venereal infectious diseases should be as strictly supervised as any other infectious malady, as they strike at the root of society, aye, indeed the State. It is pleasant to know that some States have already passed laws to better protect the contracting parties in wedlock. As soon as the profession at large becomes interested—and the date is not in the far distant future—every State will enact laws for the protection of its citizens about to enter into the marriage state. When such a prominent man

in the profession as Dr. Charles A. L. Reed deems that the time has come for him to raise his voice in behalf of this movement, it is certainly time for the rest of us to drop into line. The aforementioned book clearly demonstrates in elegant English the new responsibilities that the people are imposing on the medical profession in connection with the eugenic movement. The chapter on "The Eugenic Medical Examination for Marriage" is the first authoritative utterance on the subject from one of Dr. Reed's standing in the profession. It is a book that every sober-minded physician should thoroughly familiarize himself with, so that he can give when requested intelligent advice upon the subject. We cannot refrain from including the preface in its entirety in the review, as thereby the reader will be, in the least possible time, fully acquainted with the purpose, aim and scope of the volume:

"This book is from the pen of a surgeon, one whose daily life is largely engaged in dealing, professionally, with conditions that affect the power of the human race to perpetuate itself.

"It was first conceived as a message from the operating-room, a danger signal or a series of danger signals from the hospital ward, a revelation from the council chamber—that great and sacred confessional of the medical profession.

"The motive prompting the effort was a desire in some measure to overcome the ignorance which, in too many instances, keeps innocent victims from protecting themselves and their offspring from disease and degeneracy. An incidental object was and is to avert many of those conditions that destroy the possible happiness of the married state and convert the bridal chamber into the anteroom of the divorce court.

"This broadened purpose made it necessary to consider the laws, the natural laws of human breeding inherent in the individual, as the very foundation of my thesis. We are constantly hearing of these laws, but their text is rarely, if ever, given, and their application is but rarely explained in terms comprehensible to the reader not versed in the technical phraseology of the biologic sciences.

"It has thus come about that I have tried to prepare a brief, comprehensive and comprehensible statement of the 10 functional laws of race perpetuation—the Decalogue of Human Breeding.

"To these laws and short explanations of their significance I have added a brief description of the two diseases, incidents of vice, that are today poisoning the race. Knowledge is the best preventive of disaster. When the innocent victims of marital duplicity shall know, as I here endeavor to teach them to know, the nature and significance of the maladies that have been inflicted upon them, they will know better how to protect their rights, physical, moral and legal, and to punish the authors of their misfortunes.

"The concluding section on 'Applied Eugenics' represents an endeavor to translate the abstract into the concrete, to convert

words into action. It is a brief summary, alphabetically arranged, of genetic factors, of conditions and forces that fall within the purview of the immutable laws underlying selective breeding in the human family. The knowledge embraced under this heading has long been known to the medical profession, from whose arcana of science it is here given forth for the guidance of the people.

"I have endeavored to discuss these questions with all delicacy compatible with a statement of the truth as I have been forced to see it. The use of phrases to obscure meaning would be not only immodest, but destructive of the exhalted purpose for which the book is written, and is, therefore, not attempted.

"The topics are of vital importance to every prospective husband or wife and to their unborn children. No parent can fully discharge his or her duty without taking full cognizance of the truths that are here set forth. I therefore offer no apology for sending out a message, a proper consideration of which will, I am convinced, inure to the welfare of the people now living and of coming generations."

The urgent necessity of laws enacted to control or prevent marriage in those physically or morally unfit is forcibly brought to the attention of the reader by the inclusion in the text of a complete history of the "Jukes" family, and as a contrast that of the Tuttle. As these examples so lucidly drive the point home, they will be given in full:

"The first illustration is found in the contrasting histories of two families whose records are made to do duty in practically every work on eugenics written from the American standpoint—records, however, which have been and can still farther be paralleled by instances of similar significance.

"In the early half of the eighteenth century a hard drinker, living among forest-clad hills of Northern New York, became the original progenitor of a notorious family known to history under the fictitious name of 'Jukes.' By the end of the nineteenth century, the known descendants of this man numbered 1200 persons. Of these, over 300 received pauper support, equivalent to 2300 years of pauper support to one person; 140 were criminal offenders, and there were 250 arrests and trials; 60 were habitual thieves; 7 were murderers; 50 were prostitutes; 40 of the women were known to have had syphilis and estimated to have syphilized over 400 men, 40 of whom, in turn, syphilized their own wives; the progeny thus tainted is unknown; 30 were prosecuted for bastardy. Of a total of only 20 who acquired useful trades, 10 learned them in State's prison where terms aggregating 140 years for one person had been passed. The aggregate cost of this family to the State was known to have been $1,308,000. What the roll of crime and aggregate of cost would be after the 43 years since Dugdale's investigation staggers the imagination, *for be it remembered, these diverse streams of contaminated germ-plasm are today flowing on through the generations without let or hindrance*

from society or the State. It is small wonder that Dugdale concluded his classic investigation with the observation: 'It is getting time to ask, do our courts, our laws, our almshouses and our jails deal with the question presented?'

"In the contrasting case we have distinctly to deal with the progeny of a woman—Elizabeth Tuttle, a woman with the stamp of physical and mental superiority—who, in 1667, married a Connecticut lawyer by the name of Richard Edwards. Among her descendants there have been more than 300 college graduates, 14 college presidents, more than 100 college professors, 30 judges, 60 physicians, over 100 clergymen, missionaries and theological professors; 65 authors of 135 books, numerous editors, and a large number of leaders of indutries. This progeny is accredited to Elizabeth Tuttle, because her husband, Richard Edwards, married as a second wife Mary Talcott, 'a mediocre woman, average in talent and character, and ordinary in appearance,' by whom he had five sons and a daughter. It is recorded that 'none of Mary Talcott's progeny rose above mediocrity, and their descendents gained no abiding reputation.'

"*The personal problem presented by eugenics is for each person to see to it that, by due regard to the laws of human breeding, his or her progeny shall belong to the 'Elizabeth Tuttle' stamp rather than to the 'Jukes' stamp.*"

In considering the causes of race suicide, he says:

"While the public sentiment scathingly portrayed by Mr. Lecky has changed, the change has only come because the hypocritical policy of ignorance and pretension has produced a condition that has become intolerable to every person actuated by the combined influences of intelligence and human sympathy. The writer of these pages has professional knowledge of over 5000 women who have been sterilized by gonorrhea, nearly 2000 of whom have had to submit to dangerous and mutilating operations to save their lives. He has direct knowledge also of many hundred men, and inferential knowledge of many other hundreds who have been sterilized by the same disease. He is only one surgeon, one operator, of whom there are several thousand in the medical profession of the United States, numbering nearly 150,000 members, in a nation of over 92,000,000 people. Syphilis, the great hereditary disease of the race, is even farther reaching in its degenerative influence upon humanity.

"Fortunately, the state of public sentiment of which Mr. Lecky wrote in 1874 has given way to saner views in the second decade of the twentieth century. In Great Britain and in America medical, social and civic organizations, some of them created for the purpose, are educating the people on questions of sex hygiene and race culture. Great magazines and the daily press are lending aid to the propaganda. The pulpit is using its mighty leverage for the uplift. Professional men and women are laying aside their daily occupations long enough to go before large and inter-

ested audiences with the tale of pain and unhappiness, of disease and death wrought by the two diseases that, even in spite of the repressive influence of agitation, are yet insiduously, but all too surely, extending their ravages throughout the race."

In discussing the practical side of eugenics, the author states:

"The application of eugenic principles must always primarily be to (a) the fitness or unfitness of the individual to marry anybody, and to (b) the fitness or unfitness of a given two persons to marry each other. Many of the facts involving the application of these principles are so apparent that they can be detected and appreciated by any person of ordinary intelligence. Thus, no person would require, or at least should require, advice against marrying a confirmed epileptic, a cretin, a feeble-minded person or one afflicted with insanity, the marriage of which is, indeed, generally prohibited by law. Nor would anybody wittingly marry the victim of communicable gonorrhea or syphilis, the existence of which may, however, be either designedly or undesignedly concealed.

"It is precisely to guard against such conditions as those last mentioned and to guard against such other agenic states as certain sexual and bodily malformations and against the transmission of certain character units and diseases, at once obscure and undesirable, that the advice of a careful and competent physician, one thoroughly imbued with a sense of the responsibility thus incurred, and with the technical training to meet such responsibility, should be sought and followed by those contemplating marriage.

"It is not intended here to discuss the technical details of the eugenic examination. Such details belong to the professional training of the physician, to whom alone their application should be entrusted. It is, however, here intended so far to indicate the character and scope of the examination that those who seek its protecting influence may know when they have and when they have not received attention upon which they may, with confidence, repose their future happines and welfare.

"It should be understood, in the first place, that the necessity for the eugenic examination may apply with just as much force to one sex as to the other. It should be understood, furthermore, that the value of the eugenic examination must necessarily depend upon not only the truthfulness, but upon the fullness and frankness of answers to the necessary interrogatories. Every fact, whether pleasant or unpleasant, should be laid openly before the consultant."

Every intelligent man and woman should read and thoroughly digest its contents. There is no doubt about it being a radical advance, perhaps even ahead of the times. Heretofore the question of sex and sexual life have been inadvisably tabooed as something immodest and not to be thought of. Everyone grants marriage is primarily for the propagation of the race, and everyone entering into wedlock knows that this can only be accomplished in a definite way. If marriage is not immodest, then

surely a complete physical examination of the contracting parties beforehand is not, especially as future happiness is at stake.

A knowledge of the contents of this book by every man and woman would go a long way toward solving the marriage question, as one would be careful with whom he or she mated.

The Treatment of Rheumatic Infections. Parke, Davis & Co. 1913.

This book of some one hundred pages is devoted to the theory of the phylacogens as propounded by Dr. Shafer, together with reports of cases treated with phylacogens. The principle upon which the use of the phylacogens is founded is the theory of multiple infections. The book states that the principle is supported by an extraordinary practical experience, supplemented by exhaustive and long-continued laboratory and clinical experimental work by Dr. Shafer. Three facts are set forth by Dr. Shafer as the basis of this therapy. First: Practically all acute and many of the chronic diseases are caused by the metabolic products of pathogenic bacteria. Second: The human subject is the host of microorganisms that are pathologically latent, but capable of setting up a disease process under certain conditions. Third: The growth of infecting organisms can be arrested and their effects neutralized by products derived from their development in artificial culture media. In brief, most, if not all, infections are mixed. If one reads the proof adduced one cannot help but tacitly admit Dr. Shafer has struck upon a principle of value. Moreover, the reputation of the manufacturing house is so well and favorably known that one is compelled to give due weight to statements regarding a product of their firm. They may be wrong in their claims. If so, it is through unintentional ignorance, not greed for money. Therefore before condemning the phylacogens read what the firm has to say concerning them. The arguments adduced in favor of the remedy are strong, besides the results obtained in a large series of cases seem to confirm their most enthusiastic claims.

Case Histories in Pediatrics. A Collection of Histories of Actual Patients Selected to Illustrate the Diagnosis, Prognosis and Treatment of the Diseases of Infancy and Childhood, With an Introductory Section on the Normal Development and Physical Examination of Infants and Children. By John Lovett Morse, A.M., M.D., Associate Professor of Pediatrics, Harvard Medical School; Associate Visiting Physician at the Infants' Hospital and at the Children's Hospital, Boston. Second Edition. Boston: W. M. Leonard Company. 1913.

Morse's Case Histories in Pediatrics needs no introduction. It, together with its congeners in other branches of medicine, have well proven their merit in activating the student's mind in diag-

nosis, prognosis and treatment of disease. Without the least hesitation we state that the present edition by this writer will be found more serviceable than its predecessor, which by no means was small; because it is more thorough in covering the field, the number of case histories being more than doubled. The addition of an introductory section on the normal development and physical examination of children and infants should tend to greatly simplify the ability of the student to grasp and analyze the cases under discussion We are glad to announce to the users of this book that in all instances in which a positive diagnosis is given the conclusions have been proven absolutely correct As a means of cultivating the thinking apparatus of students and quickening their ability to arrive at conclusions, there is no better mental exercise than presenting a case in abstract and allowing the pupil to present his impressions as regards the diagnosis and outline his treatment. The treatment set forth in the book was that actually employed. As an example of book making, Morse's is a perfect example of its kind, and should enjoy a greater popularity than ever

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Principles of Surgery. By W. A. Bryan, M.D., Professor of Surgery and Clinical Surgery at Vanderbilt University, Nashville, Tennessee. Original Illustrations. Philadelphia and London: W. B. Saunders Company. Baltimore: The Medical Standard Book Company. 1913.

Certainly the underlying facts—those upon which the practice of surgery are based, if practiced with the greatest amount of intelligence—are set forth by the writer of the above in as simple and logical a way as possible. Surgical bacteriology, surgical pathology, the progress of surgical diseases, their present, past and future, surgical etiology and diagnosis and to a small extent treatment. It is well written in a simple diction which should make it available to student and general practitioner. It will be found an excellent introductory to the later course in surgical practice. As the medical man is generally the first to be consulted by patients with surgical affections, he will derive much benefit by acquainting himself with the material of this book, which presents the subject not only in an attractive manner, but with painstaking accuracy.

An Introduction to the History of Medicine. With Medical Chronology, Bibliographic Data and Test Questions. By Fielding H. Garrison, A.B., M.D., Principal Assistant Librarian, Surgeon-General's Office, Washington, D. C. Illustrated. Philadelphia and London: W. B. Saunders Company. Baltimore: The Medical Standard Book Company. Cloth, $1. 1914.

Starting with the earliest stages of medicine, the author carefully and entertainingly brings the reader down to the most mod-

ern period. Interwoven with the account of medicine is a series of bibliographical sketches of medical worthies of bygone times. It is well that the present contribution be issued to the profession, as the medical profession is a worthy and honorable calling with but little prospect of remuneration other than a bare existence to most of its followers. But the past is full of extraordinary examples of the greatest amount of perseverance and self-abnegation in order to worm out of nature her secrets. Here one finds faithfully and clearly recorded the trials, tribulations and successes of our predecessors of the Egyptian, Grecian, Byzantine, Mohammedan, Medieval and later periods of medical development. Every well-rounded physician should inform himself concerning his profession, and we know no better book in which to obtain the essential additions to medicine than the one before us.

A Compend of the Diseases of the Skin. By Jay F. Schamberg, Professor of Diseases of the Skin, Philadelphia Polyclinic and College for Graduates in Medcine; Fellow of the College of Physicians of Philadelphia; Member of the American Dermatological Association. Fifth Edition, Revised and Enlarged. 112 Illustrations. Philadelphia: P. Blakiston's Son & Co. Cloth, $1.25 net. 1913.

The above volume is misnamed, being rather a small text-book than a quiz compend. Its contents are reliable and sufficiently full if used in the proper way, namely, as an adjuvant to lectures or larger text-books. It will be found especially useful in preparing for examination or a hasty review of the subject. That it has met a need formerly is attested by the exhaustion of four volumes. As the present volume is fuller than any of its predecessors, and absolutely up to the minute, it should prove every whit as popular as they.

Hospital of the Protestant Episcopal Church in Philadelphia. Medical and Surgical Reports of the Episcopal Hospital. Volume I. Philadelphia: William J. Dorman, 1913.

In brief, Volume I, Episcopal Hospital Reports, contains an account of the work of the staff as based upon the material furnished by the institution. At the outset permit us to congratulate those interested in publishing the volume upon its neatness of appearance and the amount of good material it contains. It is well illustrated and excellently portrays the caliber of the work being done. Dr. Charles Harrison Frazier contributes an article from the surgical clinic entitled "Review of One Hundred and Fifty Consecutive Operations." Of the 150 almost 100 were for abdominal conditions. In the series there were only four deaths, a percentage of 2.5. There were 30 operations for appendicitis or its complications, 22 for hernia, 8 for lesions of the stomach or

duodenum, 18 operations on the pelvic organs with four hysterectomies, 4 on the biliary passages, 14 upon the urinary organs and three thyroidectomies. Of the four fatal cases, one was due to tubercular meningitis, the second a strangulated umbilical hernia. Considering the variety of the affections treated, the above record is certainly more than good.

In an article on the "Antitoxin Treatment of Tetanus," Ellis E. W. Given strongly urges the practice of administering a prophylactic dose of tetanus antitoxin to all patients having wounds contaminated with street dirt, garden earth, etc. In these cases he always follows this practice. It is good advice, and the reviewer strongly urges the practice. One of the most instructive articles is that on "The Clinical Significance of High Blood Pressure, With Remarks on Its Management," by George Morris Piersol. He says for the most part hypertension falls into one of three classes: (1) Chronic nephritis, especially the chronic interstitial type; (2) arteriosclerosis, and (3) a group of cases in which neither of these conditions is present to account for the elevation. When speaking of treatment he says: "When high arterial tension was first recognized there was a disposition to combat the symptom with combative measures, but happily this tendency has yielded to a more rational conception of the process, and clinicians everywhere are learning to follow the teachings of Krehl and others, and are coming to regard high blood pressure as a conservative process." He further states the treatment falls under two heads: (1) Prophylaxis, and (2) its management when once developed. In arteriosclerosis and nephritis, the chief causes of hypertension, it is more than ever true an ounce of prevention is worth a pound of cure. He advises in middle life the frequent taking of both the diastolic and systolic blood pressures, and if there is detected a tendency to elevation, the prohibition of overexertion, great mental strain and worries. The patient should be ordered to take a proper amount of rest and recreation. All sources of chronic infection as sinusitis, pyorrhea alveolaris, etc., should be removed. Proper elimination should be insured and the bowels should be kept freely moved. Alcohol, coffee and all irritating food or drink should be strictly interdicted. The intake of nitrogenous food should be reduced. In well-developed cases he employs with due precaution the nitrites, nitroglycerine, digitalis, iodides, etc., but adds the caution, all things considered, it must be admitted in well-developed hypertension, be it of vascular or renal origin, efforts to lower it are of but little avail. On the other hand, there is but little doubt that the general hygienic treatment of these patients, relieving them from physical exertion and mental anxiety, regulating their digestion and promoting their elimination, is a most important factor in adding to their comfort and prolonging their lives.

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BALTIMORE, APRIL, 1914

PRACTICAL SANITATION.

UNDOUBTEDLY the health of a nation to a very large extent depends on a proper safeguarding of the living conditions under which the population lives. It has taken this idea a long time to permeate through the minds of the profession, the public servants, and last but not least the public itself. Prevention is worth a great deal more than cure, and it is with this aspect of medicine that the sanitation expert deals. Sanitary medicine concerns itself with the cognate subjects, infectious processes, the management of epidemics, isolation and quarantine, isolation hospitals and camps, disinfection, the handling of infectious diseases, the organization of the sanitary service, the birth record, disposal of garbage, school inspection, factories and workshops, institutions and prisons, milk, water nuisances, registration of deaths, as well as many other questions. There is no doubt but that the greatest advances in medicine in the future are to be along sanitary lines. One has only to look at the results accomplished by the Japs in their war with Russia to fully appreciate the important part that sanitary medicine played in maintaining the health and efficiency of the Japanese Army. The remarkable results accomplished by Colonel Gorgas in making the Panama Canal possible is another tribute to sanitary medicine. Everybody is aware of the dismal failure of the attempt of the French to wed the Atlantic to the Pacific Ocean. The American people should glory in the part played by Americans in advancing sanitary, which means preventive, medicine. Carroll, Reed, Lazear, typical Americans one and all, blazed the way, Gorgas finished the job. A region supposedly uninhabitable to the white race was transformed into a

veritable health resort. These remarks have been called forth by the appearance of a book, unique in character, by Fletcher Gardner and James Persons Simonds, entitled "Practical Sanitation." The subject is of such importance that it was determined to focus special attention upon it by placing the review in our editorial space. As far as we are aware, this is the first effort to treat the subject in such a comprehensive style. One is always and ever impressed with the carefulness with which the authors enter into the treatment of the subject. No minutiae is too small to be left unexplained. The chapter on quarantine is particularly illuminating. One is also impressed with the earnestness with which the author endeavors to impress the urgency of proper school inspection, as well as the necessity for the extermination of rats, flies, mosquitoes, bedbugs, fleas and other vermin that carry disease. Certainly a book of this character should wield an important influence in creating a healthy interest in sanitary medicine, as it covers the subject from beginning to end. It tells briefly but thoroughly what has been accomplished by sanitary effort and what might be expected by a better understanding of the subject. Undoubtedly such a book should be of immense value to the sanitary expert, the ordinary doctor and the student. Besides, it is written in such a simple style that it is available to the lay mind also. Surely public and personal health are sufficiently prominent in the public mind today to welcome the contribution of a single-volume moderate-price book upon the subject, as anyone now, without the loss of much valuable time, can find out the status of any subject relating to sanitation. Besides, it makes available to everyone the latest and the best thought upon the subject with which it treats. It is plain that the future belongs to the nation which has the greatest proporion of healthy, strong citizens, hence the national and State governments are deeply interested in preserving and improving the public health. Therefore, any agency which tends to propagate and spread the doctrine of efficiency is dependent not only upon personal but upon public health, which can only be attained through proper inspection of the water, sewage and other sanitary conveniences, and is worthy of the greatest consideration by the profession. Such an agent is the above-mentioned book, which treats of public and personal hygiene. Its teachings are true and thoroughly reliable, and it may be confidently stated that if its directions and lessons are heeded, the efficiency, wealth and happiness of the Commonwealth will be greatly augmented.

Medical Items.

The engagement is announced of Dr. De Witt Bellinger Casler, Johns Hopkins Medical School, '04, of 19 West Chase street, to Miss Carolyn Brooks Johnston of this city. The wedding will take place in the spring.

The Department of Oto-Laryngology of the Presbyterian Eye and Ear Hospital has a vacancy for a conscientious assistant. Communicate with Dr. Leo J. Goldbach, 322 North Charles street, Baltimore, Md.

The Governor has appointed Dr. Henry Barton Jacobs of Baltimore and Dr. Guy Steele of Cambridge members of the board of managers of the State Sanatorium at Sabillasville.

Dr. George W. Dobbin, who has been confined to his home on account of a severe sprained knee, is very much improved.

The Fourth Annual Health Conference of the Medical and Chirurgical Faculty of Maryland was held in Osler Hall, March 9-14, 1914.

Dr. Hugh H. Young, president of the State Lunacy Commission, and Dr. Arthur P. Herring, secretary, both of Baltimore, represented Maryland in the delegation that appeared before the United States Senate Committee, which has the immigration bill in charge. One of the principal things that the Maryland delegation asked for was the appointment at this port of an alienist. They stated that at the present time 10 per cent. of the insane patients cared for by the State of Maryland are aliens, and the greater proportion of these incompetents would not have been a burden on the State if there had been adequate examination of their mental capacity before being allowed to enter this country. When the new immigration station is completed there will be a great increase in the number of foreigners entering through this port, and the number of insane on the State's hands will increase unless something is done.

Surgeon Lunsford D. Fricks, U. S. P. H. S., spoke before the Franklin Square Medical Society on "The Rocky Mountain Spotted Fever."

Health Commissioner Nathan R. Gorter has made the following appointments to Sydenham Hospital for Contagious Diseases: Superintendent, Dr. John F. Hogan, Baltimore, to succeed Dr. T. S. Nicholson; assistant superintendent, Dr. Walter W. Point, Jr., and State laboratory assistant, Dr. Claude Van Bibber.

Dr. Clement A. Penrose read a paper, entitled "Efficiency and the Quality of Life," before the March meeting of the Baltimore County Medical Association, which was held at the Medical and Chirurgical Faculty Building, 1211 Cathedral street, March 18, 1914.

The foundation of the new South Baltimore Eye, Ear, Nose and Throat Hospital was started recently. The laying of the cornerstone will not take place until William Grecht, who donated $10,000 toward the building fund, arrives home from Europe early in May.

Dr. Charles W. Mitchell delivered an address on "Infant Feeding," and Dr. Frank Martin gave an illustrated lecture on "Bone Planting" before the Washington County Medical Society, which met at Hagerstown, March fifth.

The final plans for the new addition to the Hospital for Women of Maryland were decided upon and the builder selected by the board of directors and the advisory board at their recent meeting. The contract for the building was awarded to Edward Brady & Sons. The cost will be $110,000. The directors recently pledged themselves to raise $17,000 of this by July 1.

Construction will begin immediately, and the new wards are to be ready for occupation by October 1. The building it to be four stories high, 78x150 feet, and will conform architecturally to the present building. Joseph Evans Sperry was the architect for both.

Dr. Martin F. Sloan, superintendent of the Eudowood Sanatorium, has returned to Towson after three months' leave of absence, which he spent at the U. S. P. H. S. Sanatorium, Fort Stanton, N. Mex. He was in charge of a department there for three months to administer a special form of treatment.

Dr. Ira J. McCurdy, for four years a surgeon in the Maryland National Guard, has resigned. He had attained the rank of captain.

Dr. Howard A. Kelly has returned to his home on Eutaw Place from a six weeks' trip to Europe. The object of Dr. Kelly's trip abroad was to place his son in a school near Winchester, England.

Dr. and Mrs. Henry Barton Jacobs have closed their town residence, 11 W. Mount Vernon Place, and recently sailed for Europe, where they usually spend the spring months.

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CANCER OF THE TONGUE, BASED UPON THE STUDY OF OVER ONE HUNDRED CASES.*

By Joseph C. Bloodgood, M.D.,
Baltimore, Md.

THIS study has led to some very remarkable conclusions.

It has been demonstrated that the failure to cure when the cancer of the tongue is fully developed is due chiefly to the neglect to remove the muscles of the floor of the mouth below the cancer.

The high mortality after operations for cancer of the tongue is chiefly due to the removal of the floor of the mouth without removing a section of the lower jaw.

The investigation has also shown that if a lesion of the tongue is subjected to immediate operation within a few weeks after the onset of the lesion the chances of a permanent cure are best. In this stage it will usually be sufficient to remove the local lesion, with a good margin of healthy tissue, and this removal should be done with the electric cautery. The center of the lesion should be preserved for microscopic study. When this is done the chances are that the lesion will still be benign. But even though the lesion prove microscopically cancer, the probabilities of a cure are almost 100 per cent.

In the past surgeons have apparently removed too much of the tongue and have performed too extensive operations upon the glands of the neck. Now, this is theoretically incorrect, because cancer of the tongue infiltrates into the glands of the neck through

*Author's abstract of paper read before the Americal Surgical Association, New York, April 9, 1914.

the floor of the mouth. Should the glands be involved and the floor of the mouth not be removed, one could hope for little, if anything, from such an operation. If the glands of the neck are not involved, this does not preclude infiltration of the floor of the mouth.

When the operation is performed in one stage it is impossible to remove the tongue, the floor of the mouth, and the glands, and then to close the opening in the mouth, unless a section of the lower jaw is also removed. If the former operation (without resection of the jaw) is done thoroughly the mortality is very high—almost 80 per cent.—from primary or secondary pneumonia, or a late infection from the oral fistula.

The author was first impressed with these facts when it was found that the first cured cases were either cancer originating in the floor of the mouth, or cancer of the tongue invading the floor of the mouth, in which it was absolutely necessary to resect portions of the lower jaw in order to remove the disease. The extent of the disease, therefore, forced the surgeon to the more radical and mutilating procedure, and allowed him to perform removal *en bloc*. During the same period earlier and more favorable cases were subjected to less extensive operations. When the floor of the mouth was not removed local recurrence always followed, and when it was thoroughly removed without resection of the jaw the patients died from the operation.

The author, in November, 1910, for the first time, deliberately, in a favorable and early cancer of the tongue, removed the right half of the tongue, the right floor of the mouth, the right half of the lower jaw and the glands on the right side of the neck in one piece. The wound was closed by suturing the mucous membrane of the right cheek to the remaining half of the tongue. The patient swallowed at once after the operation, and no recurrence followed. The microscopic study showed that the floor of the mouth was infiltrated, but the glands were free.

As the removal of the lower jaw, especially in the region of the symphysis, is mutilating, the author has attempted to accomplish the same results in a different way.

The glands of the neck are first removed, and after the operation, their connection with the floor of the mouth below the lesion is thoroughly burned with the cautery, and the wound closed. Then the lesion in the tongue or floor of the mouth is attacked with the electric cautery. The application of this is usually repeated two or more times, until everything is destroyed down to the area of the first cauterization from below. The healed skin flap of the first operation forms the floor of the mouth and prevents an oral fistula.

The first operation after this method was performed in April, 1912, two years ago. The lesion was a cancer occupying the floor of the mouth between the tongue and the symphysis of the jaw. It was about the size of a silver dollar. Permanent cures have

been accomplished in similar cases by an *en block* dissection of tongue, floor of the mouth, jaw and glands. The oldest case lived fifteen years, but this is a very mutilating operation, and the recent patient refused to submit to it. This led the author to attempt what he had had in mind for some years. At the present writing—two years since operation—there is no evidence of recurrence and no mutilation.

Since then four cases have received this treatment with, so far, apparent success.

The majority of cases of cancer of the tongue seek surgical aid at an unnecessarily late period. In every case the patient is warned. There is always something to be seen and felt in the tongue or floor of the mouth. If such a lesion is investigated at once, a local operation with the electric cautery should be sufficient; in a little later stage removal of the glands and repeated cauterization in the mouth; in still later stages resection of the jaw must be done. The author's recent experience seems to show that this operation should be done in stages: First, thorough removal of the glands with cauterization of the floor of the mouth from the neck wound; second, cauterization of the lesion within the mouth; third, removal of the lower jaw and cauterized area. These points will be discussed in detail with illustrative cases in the complete paper.

When the cases observed up until 1908—a period of 18 years—are compared with those observed during the past five years, the influence of education is well shown. The very early precancerous lesions have increased from 8 to 30 per cent. The late and inoperable cases have decreased from 18 to 10 per cent. The cures have increased from 21 to 50 per cent.

When the author considers the cases personally operated on by him by these newer methods in the past five years (14 in all) he finds that there has been no post-operative mortality, and so far but one patient is dead of recurrent carcinoma. In this case the lesion of the tongue had previously been subjected to operation, the recurrent tumor was extensive, and the glands of the neck involved. In this group every type of operation according to the newer methods just described is represented. At the present time there is evidence of recurrence in only one case. Here the recurrent lesion was most extensive and the operation most radical.

The experience with these 14 cases prove the point as far as the immediate mortality is concerned, because, considering *all* cases studied, the post-operative mortality has been about 22 per cent. Since recurrences, as a rule, take place within one year of the operation, the results in these 14 cases also demonstrate that the improved methods promise a much larger per cent. of permanent cures, and certainly a longer freedom from recurrence.

We have, therefore, apparently conquered the technique of operations for cancer of the tongue. Now, if we can educate men to come earlier, we shall probably conquer the disease.

THE PRESENT STATUS OF RADIOACTIVE THERAPY IN MEDICINE.

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THE marvelous qualities of radium have excited the interest of patient and physician alike. Owing to the untiring investigations of a few men, a great amount of scientific work has been accomplished within the past few years. Though we are only at the beginning of a new field of therapeutic development, it is interesting to recapitulate at this time the different effects of its physical properties. Radioactive substances are split up into new elements of smaller atomic weight. Three different rays are observed during this process of division: Alpha Rays, or Helium Atoms, with positive electric charge; Beta Rays, composed of electrons of the smallest negative electric units, and Gamma Rays, which are not composed of any material particles, but are attributed to an electromagnetic vibration of ether similar to light.

These three rays are produced by the radioactive substances in varying quantities and in varying mixtures. The rapidity with which this splitting process takes place is of the greatest importance, and for its estimation the term "half value" has been adopted, which is the time required for any quantity of radioactive substance to be reduced by this emanation process into the next following element to 50 per cent. of its original amount. Owing to the great difference in the time required for decomposition, the preparations vary greatly. For some purposes products with a rapid decomposition are required, for other purposes the preparations which decompose very slowly are desirable.

Radioactive substances are the carriers of energy which, set free at the moment of decomposition, yield heat and electrical chemical effect (decomposition of water by the alpha rays, ozonization of the atmospheric oxygen). The amount of energy produced during this decomposition is enormous: (1 c. c. of water during explosion yields 2 gramcalories, while 1 c. c. of radium during decomposition gives 20,000,000 calories.) The greatest amount of energy is contained in the alpha rays, which are estimated to travel at a rate of nearly 20,000 miles a second, whilst the beta rays have a velocity of about 90-100,000 miles a second. This form of energy introduced into the body cannot be without consequence to the function of the cells and the organs (Hampson[1]). Not only molecules of water, but also inorganic and organic cell complexes may be broken up. At the present time, however, our knowledge of these changes is incomplete, so we must observe the greatest care and precaution in their use for therapeutic purposes. As shown by experiments by Falta and Zehner,[2] radioactive substances (Thor. X) decolorize certain anilin dyes, oxydizes guaiac resin, aloin; pharmaceutical products are decomposed

(morphia, atropine, sod. salicylate, pilocarpine, adrenalin, starch; and solutions of albumen are hydrolyzed and split up (Schwarz[185]). The effect of radioemanation upon uric acid is still under discussion. According to some authors (Gudzent,[3] His,[4] Messernitzki,[5] Falta[231] and Zehner[2]), uric acid and monosodiumurates when in solution split up into CO_2 and NH_3. Thorium X seems to alter uric acid in such a way that neither the precipitation with the hydrochloric acid nor the murexid test can be obtained. Such a view is opposed by Lazarus,[6] Kerb[7] and Lazarus, Saillard,[8] Knaffl, Lenz and Wiechowski,[197] Plesch.[230] Messernitzki has demonstrated the destructive influence of radioemanation upon the oxypurines. Lecithin also undergoes decomposition when treated with emanation (Kerl,[10] Schwarz, G.,[234] Schwarz and Zehner[11]); this fact has, however, lately been contested by Neuberg and Karczag,[237] Kohlrausch,[150] Sommer,[247] H. Dominici, G. Petit, A. Jaboin, A. Chauveau [262]; also Gelatino (Fuerstenberg[150]).

The different tissues and cells of the body offer a certain affinity to the radioactive substances, a similar attitude holds true for the different alkaloids, metals, metalloids, immune bodies, etc., which substances become more or less closely attached to the different cells. Although an elective binding of the radioactive substances within the body is still under discussion, certain investigations (Ebler[176], Karczag and Plesch,[12] Kionka,[13] Ramsauer and Caan[14]) speak in favor of a storage of radioactivity in the bone marrow, liver, lymph glands, kidneys, spleen, brain, serum and in the serous cavities of the body. Depots of radioactive substances under the skin (Prado Taglo[15]) are followed by more or less pronounced local reaction, hyperemia, capillary dilatation, cellular, leuco and lymphocytic infiltration, and the formation of fibroblasts, which processes finally result in scar tissue. According to the dose employed we can either stimulate or so damage the body cells that finally necrosis follows (Sommer,[247] Sticker, Van Noorden l. c., Birch Hirschfeld[248]). Further pathological manifestations resulting from an overdose of radioactive material will be mentioned later. It is probable that the greatest amount of energy that becomes free during the explosion of the radioactive molecule is electricity. Our most enthusiastic expectations that electrotherapy would cure any disease have, of course, been shattered. Recent investigative work upon the psychogalvanic reflex phenomena, however, would indicate that our knowledge upon the physiological and pathological action of electricity needs further understanding (Gildemeister,[153] Leva,[154] Gregor and Loewe,[155] Veraguth,[156] etc.). We have become more moderate, and now see in such a treatment not only a psychic means, but also a method for applying to the skin a stimulant whose intensity can be accurately gauged, and we thoroughly recognize today that most of the electric energy remains on the outer surface of the body. With the use of radioactive substances, however, we are enabled to distribute these carriers of electric energy within the body, so it is

possible to expose the humors, protoplasm, the nuclei of the cells directly to the shelling of electric explosions. Radium and radioactive substances introduced into the body are eliminated through different organs (Kahlmann,[157] Laqueur,[16 159] Fleischmann,[17] Schnee,[18] Ramsauer and Caan,[14] Kenji-Kojo[19]), chiefly by the lungs, kidneys, intestines and the skin.

Substances and Methods Used.—The only substances here considered are those recommended for internal medical purposes.

The following qualities are required:

1. Easy application for the patient, with no risk of dangerous effects, provided the proper dose is applied.

2. The time of decomposition has to be neither too short nor too slow, the best preparations being those with a half value of a few days, *i. e.*, for radium emanation and for thorium X.

3. The dose must be absolutely reliable, notwithstanding the kind of preparation used. Many of the radioactive substances on sale have given rise to complaints with reference to the proper standardizing.

The power of these preparations is valued according to electrostatic units multiplied by 1000 (M. U.) Mache units=equivalent to 1 electrostatic unit.

4. The preparation used should not be too expensive. There is in the open market a marked difference in the price paid for the same amount of energy. In the form of mineral water or in the form of radioactive compresses, this difference in price is less striking. The cheapest preparation now existing, equivalent to a bath taken at Gastein, namely, the R. E. Bath preparation from the Radium Factory Neulengbach (V. Noorden), costs about 65 cents.

Provided that careful and reliable manufacturing is maintained, the following substances are mostly recommended:

A. Radium.
   1. Emanation of radium.
   2. Radium and its salts, in solid and soluble form.

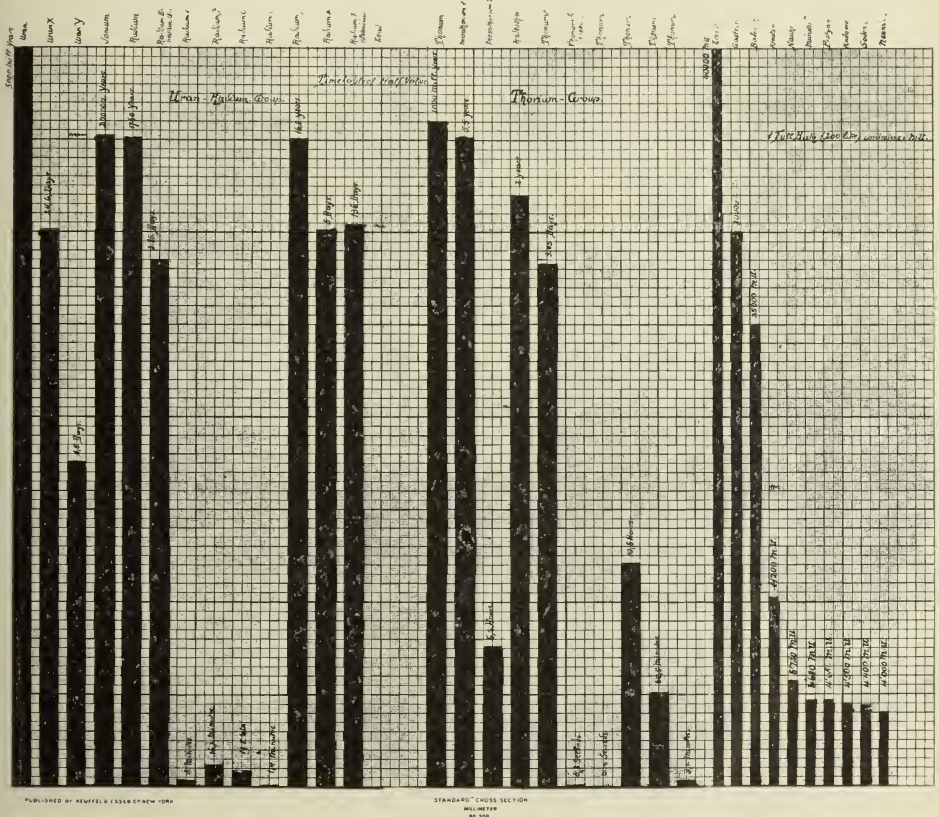
B. Thorium. Solutions of Thorium X.

A. Radium.
   a. Emanation of radium.

Metallic radium or in the form of salts decomposes into two gaseous bodies—helium, a permanent gas, and radium emanation, or nitnon (Ramsey, Lowe[164 183]), which immediately undergoes further disintegration. During this process the emanation itself can be transformed into solid compounds. During the continuous formation of the rays, a series of solid bodies Radium A-B-C-D are rapidly formed. These substances are also called active precipitates. Radium D is represented by a substance which disintegrates only slowly, and which furnishes only a small amount of beta rays. According to later investigations, radium D does not possess a powerful physiological and chemical action, contrary to a view formerly held by Gudzent,[3] P. Lazarus.[19]

The dosage of the emanation can easily be ascertained in a watery solution. The loss of emanation in a given time can be

calculated, so the solution of emanation can be given just the strength required at the moment when it is used. In quite a number of mineral springs, the action of which prior to the discovery of radioactivity could not be properly explained, is now attributed to the presence of radioactive emanation. The following table of famous springs shows the number of Mache units contained in a bath of 200 liters. More recently discovered springs are those of Joachimsthal in Bohemia. The radium Kurhaus, supplied with all the modern appliances, contains in the full bath



120,000 Mache units. One spring recently discovered (Barbara) is even estimated to contain 5600 units in the liter, for one full bath 1,120,000 units. Another very powerful spring not yet completely utilized in Brambach contains 400.000 Mache units in a full bath (Van Noorden,[69] Czapski,[184] Weidig[188]).

The remnants of Pechblende left in the water render it radioactive. By this means it has become possible to prepare baths equal in strength to those of Gastein (about 30,000 Mache units) Neusser,[187 251] Gottlieb[250]. These, it is said, act favorably upon chronic rheumatic processes. The residue left during the manu-

facture of the urancolors contains a mixture of all radioactive substances found in the series of the Uran elements, and water acting upon these substances becomes largely charged with radioactive emanation. This fact opens an immense future for the utilization of radium emanation if water be allowed to pass over rocks containing uran. Also in form of compresses with radioactive water good results were mentioned (Kraus[261]).

At the present time it must be admitted that the skin is able to absorb a certain amount of emanation (W. Engelmann,[20] Strassburger,[21] Kemen,[22] Neumann[23]), but still the greatest part in entering the body has to pass through the respiratory tract (Loewenthal,[173 244] Saubermann,[24] Smith and Bellingham,[25] Strassburger,[21] Lazarus,[19] Eckmann,[202] Berg and Welker[245]). It is admitted that one fraction of the exhaled emanation can be reabsorbed by the lungs (Lazarus[19]). In order to make the heavier emanation more available for absorption, high bathtubs have been recommended which check the escape of the gas, besides special devices which direct the emanation directly toward the mouth of the bather (Strasser and Selka,[246] Kemen,[22] Eichholz,[26] Kionka,[13 26] Scholz,[27] Lazarus,[19] Glaessgen,[28] Sommer[208]). The appliance of emanation by the electric current, cataphoresis, also has to be mentioned (Kohlrausch[29] and Meyer, Schnee,[18] Gerke,[30] Markwald,[172] Eckmann,[202] Kühnelt[220]).

As radioactive substances are found everywhere—in the soil, in water and in the air (Elster and Geitel,[31] Saake,[242] Grapley,[32] Hampson, Rutherford, Soddie,[1] Artmann,[170] Frech,[175] Gockel,[178] Grube,[181] Starke,[182] Kohlrausch[243])—it is very important to be able to determine the amount present, especially with the view of checking the advertisement of certain mineral springs which contain too small an amount of emanation to produce any therapeutic effect. The following scale may be of use:

(1) Strong radioactive springs containing 100 Mache units in one liter or more.

(2) Medium radioactive springs with 50-100 M. U. in one liter.

(3) Weak radioactive springs containing 20-50 M. U. in one liter.

With the exception of certain springs (Teplitz, Schoenau, Hauser,[160] Kolarz,[161] Artman[162]), which by means of special arrangements are enabled to render the air of the inhalation chambers very radioactive, water resorts with an emanation of less than 20 M. U. should not be allowed to advertise their springs. The second way of administering emanation is by means of inhalation, which method necessitates special rooms with air-tight walls, oxygen apparatus and tanks for the absorption of carbondioxide and water; the emanation reaches the chamber through isolated pipes and air shafts (Glaessgen[28]) or by means of a ventilator. The method of radium treatment by inhalation was inaugurated by the school of Berlin, and doses applied corresponding to 2-4 Mache units per liter of air given daily for two to three hours (His,[33] Gudzent,[3 34 211] Loewenthal[35 244]). The results

reported showed that hygienic and dietetic measures could not be substituted by the emanation treatment; also that weak doses did not always produce a remarkable change in the morbid manifestations. There are only a few instances in which weak doses, *i. e.*, 4-8 Mache units to the liter of air, produced typical reactions on supposedly very susceptible individuals with subacute rheumatism and tabetic pains. As a rule, however, the air should not contain less than 25 Mache units to the liter. Even higher doses can be given, but should, however, not exceed 500 Mache units. For experimental purposes higher concentrations up to 1200 Mache units have been used (Falta,[26] Knaffl, Lenz,[37] Von Noorden and Falta,[189] who experimented with 40,000 Mache units, a dose which produced marked pathological changes).

It is most important that the physician prescribing radium inhalation should be well informed about the strength of emanation given, so the following classification could be adopted:

(1) Weak emanatories, in which 8-12 Mache units are contained in a liter of air.

(2) Medium strong emanatories, in which 12-25 Mache units are contained in a liter of air.

(3) Strong emanatories, in which 25 Mache units and more are contained per liter of air.

All emanatories containing less than 8 Mache units should be closed, as their weak action can only discredit the method, as such institutions may become a means of exploitation of the believing public. The expensiveness of such emanatories, by which only a small amount of emanation can be introduced, and the short duration of the emanation in the body, it being shortly eliminated through the lungs as soon as the patient leaves the institution, render such a treatment very expensive. The total amount of the so-called active precipitate, once in the body, is rapidly changed into the inactive radium D. The objections to emanatories are the long stay of the patients in badly-ventilated chambers, which, of necessity, cannot be healthy; also the possibility of the bacteria present infecting the patients (Lazarus[38]). Certain natural baths and gases which are radioactive (Franzensbad, Neunadowiczs[39]) also give good results. In order to avoid the expense of the emanatory, smaller apparatus ("activators"), allowing of bedside use, have been constructed (Bulling,[40] Lazarus,[38] Saubermann,[34] Bickel,[41] Engelmann,[42] Sommer,[43] Ashoff,[44] Loewenthal[45]). These applications have doubtless a future, as the dosage of emanation can be regulated to the strength required for each case in question. Therapeutically, favorable results have been reported with the use of emanatories (Kionka,[13] His,[33] Gudzent,[34] Lachmann,[46] Fürstenberg,[47] v. Jacksch,[48] etc., Neunamovicz,[39] Mannes and Wellmann[167]).

A third way of emanation treatment is recommended in the form of drinking radioactive waters (Eichholz,[51] Engelmann,[49] Armstrong,[50] Kemen,[22] Schucking,[52] Messernitzki,[53] Mache and

Suess,[54] Nagelschmidt,[55] Lazarus,[56] Benczur,[57] Kionka,[13] Spartz, etc., Fleischmann,[58] Strassburger,[59] Davidsohn,[61] Gudzent[211]).

Experiments have shown that radioactive solutions and substances in the gastrointestinal tract give off their different rays, which pass through the walls and are absorbed directly into the blood and so can act upon the different digestive glands, the body cells and ferments. The relatively slow progress of the intestinal content allows a gradual absorption, which effect is particularly desirable in the cases of abnormal processes in the liver, etc. A gradual accumulation of emanation within the body is generally admitted, but to what extent this is possible opinion still differs (Gudzent,[60 211] His,[4 33] Kemen,[22] Lazarus,[19 56] Dominici[94]).

In morbid manifestations of the gastrointestinal tract the sipping cure of Lazarus[19] has given good results, as in irritation of the stomach, hiccough, vomitus matutinus and hyperemesis. Small and repeated doses during the day seem to have a more general effect than if the emanation is given in one daily dose of 1000-2000 M. U. This, of course, means a small amount, as the emanation is rapidly eliminated by the body, although certain authors claim a good result even with weak but constant doses of emanation (Benedict). Some authors (Falta, etc.) have employed 20,000-60,000 M. U., and they attribute their good results to the higher dosage, provided that the patient can meet such expensive treatment.

A great number of radioactive preparations within the last few years have been put on the market, substances which have been activated from the deposits in the mud of radioactive springs (radiogen, emanosol, radiol, etc.) as baths (Löwenthal,[244] Laqueur[257]), cushions, compresses, etc., impregnated with radioactive substances (Lazarus,[19 56] Fr. Scholz,[27] Kemen,[22] Schueking,[52] Aschhoff,[44] Benczur,[57] Friedrich,[66] Strassburger, Eichholz,[180] Strasser,[200] Braunstein,[258] Schweitzer,[205] Sommer,[247 249] Darier,[252] London,[253]). Good results with these compresses and other appliances have been recorded by various authors in disease, as subacute and chronic rheumatism, arthritis, neuralgias, etc. The effect is ascribed to the different emanating rays, although the quantity of emanation available to act upon the skin and the subjacent tissues cannot be considerable. The main process, however, is based upon the diffusion of gases. It can be easily concluded that only a very small amount of emanation enters the body. More powerful cushions and compresses are exceedingly expensive, but may give more favorable results. They are indicated in cases of monarticular and chronic rheumatism, in the painful relics of chronic rheumatic arthritis, during the painful relapses and manifestations observed in the Heberden nodes and in neuralgias of the fifth nerve.

The small bags containing metallic radium (Buxbaum[62]) or its salts may be restricted to the radiotreatment in dermatology and surgery. It may be briefly mentioned that the mud of Zirconium,

containing thorium and used for radioactive compresses, seems to give good results (Gudzent[3]).

2. *Subcutaneous Use of Radium Salts.*

Emanation injected subcutaneously has been resorted to in exceptional cases; its effect is too evanescent for practical purposes. The injection of radium salts (bromide or chloride of radium) in weak solutions, one of the oldest means of application, is more important. The slow elimination of the radium through the body provides a more continuous emanation and the production of electric energy. This action can be maintained by successive injections of the radium solutions given in doses of 1 c. c. If these ampouls contain 1000 M. U., they would be equivalent to 0.000003 gr. of radium. According to several investigators, it seems doubtful that any therapeutic effect is had with such minimal doses. In order to obtain a local reaction in particular, a dose must be given many times higher than that first mentioned for chronic rheumatic disturbances. In such instances the solution has to be injected in the tissues adjacent to the diseased joints (Gudzent, Nahmmacher[206]). To produce general reactions, as that desired for a reaction of the red and white blood cells, 20-30,000 M. U. are required (Falta,[36] Brill,[63] Freund,[36] Kriser,[64] Zehner[65]). In experiments on animals, 0.00001-0.00002 gr. of radium for every 1 kilo. body weight was required for every dose, producing no undesirable consequences. For a patient of 155 pounds body weight, 1/180-1/120 gr. or radium would be required. This question, still in the phase of experimental study, cannot be conclusively discussed at the present time. It would seem, however, that the doses formerly used were too small.

At this instance it may be well to mention the pathological changes which were produced in cases where overdoses of emanation were given. Messernitzki[68] directed the attention upon pathological destructive changes in the skin after handling radioactive substances (ulceration and dermatitis). Obersteiner, Loewenthal[67] mention experiments upon mice where marked changes in the ganglionar cells of the brain were encountered. A similar fact has been reported by v. Knaffl Lenz,[37] who experimented with large doses of emanation (40,000-4000 M. U. per liter air) on rats. His findings were: General hyperemia of all the organs, especially the lungs; degenerative changes of the nervous elements of the brain (shrinking of the ganglionar cells, disintegration of the nigroid bodies, formation of vacuoles, homogeneous aspects of the ganglionar cells).

If we will avoid undesirable results with high doses of radioemanation, we should remember the fact that we may damage the vitality of the cells to such an extent that they are destroyed and become necrotic (Lazarus,[38] v. Noorden,[69] Prado Taglo[15]); so individualization and discrimination becomes necessary. It is best to increase the dose gradually from 100 M. U. upward, and best

after meals if the intestinal tract is chosen from which the energy is to be spread throughout the body (Messernitzki[5 9 53]).

As a further improvement, it should be required that the usual strength indicated on the ampouls, 1000 M. U., should be replaced by the statement how much metallic radium is contained in the given solutions, and it would even be desirable that this supervision should be carried out by the State. From all the literature, it would seem that radium treatment by means of injections has a great future, but it is yet too early to recommend it for general use or to stamp this method as a specialty (v. Noorden[69]).

(B.) THORIUM.

In the series of elements which belong to the thorium group, there is also found a gas called thorium emanation (Rutherford, Soddy[1]), which is of so short a duration that it cannot be used for medical purposes (Bickel,[70] Emsmann[71]); nor can it be inhaled. Among the substances that arise during the process of decomposition, mesothorium, radiothorium and thorium X have been used, principally in form of injections or in the form of radioactive solutions. The rapid disintegration of these products makes it very difficult to obtain a pure substance free of undesirable impurities. Radiothorium is represented by a solid body which decomposes very slowly. According to some authors (v. Noorden[69]) this product is considered as almost indifferent therapeutically, whilst others (Keetmann,[72] M. Meyer, Sticker[214]) attribute to it great energy.

Medicinally, most attention has been concentrated upon thorium X. This is a solid body, half value 87.5 hours, belongs chemically to the earth alkalies, is easily soluble and forms salts which dissolve freely, for being used in solutions, given by mouth or in subcutaneous or intravenous injections. This compound is very rich in rays (mostly alpha rays, less beta rays). The elements of decomposition disintegrate very quickly. The elimination of thorium compounds through the body is very slow, so that the greater part of the injected material in the body can give off electrical energy. About 28 per cent. of the material introduced into the body is eliminated, chiefly by the digestive tract, to a small extent by the kidneys, lungs and the skin (Plesch and Karczag[12]). There is generally admitted a certain affinity of the different body cells for thorium, bone marrow, lymph glands, spleen, liver, brain, etc. (Karczag and Plesch). The molecule of thorium X within the body undergoes at least five different electrical explosions, which give off new electrical energy, and so warrant an extensive utilization within the body. It is evident that this extensive utilization of each decomposing thorium X molecule and the possibility of an accurate dosage mean a serious competitor to radium emanation, as the latter allows only an unreliable dosage, which renders the control exceedingly difficult. According to the present understanding of the elements which belong to the radium and thorium series, the biochemical effects seem to differ only quantitatively.

It cannot be denied that greatly varying differences in the preparations used will be met with—differences which will, of course, influence the intensity of the effects and of the results obtained, and still more investigations along these lines are indicated. Solutions of thorium X, partly given by injections, subcutaneously or intravenously, or in the form of drinking water, have been tried in many instances (Emsmann,[71] Loehe,[73] Minami,[74] Koyo,[75] Prado Taglo,[76] Keetmann,[72] Gudzent,[78 211] Plesch and Karczag,[12] Falta,[36] Minkowski,[79] Bickel,[80] Tsiwidis,[81] Klemperer,[82] Hirschfeld,[83] Zinn,[84] Kneisel,[85] Nagelschmidt,[86] Domarus,[88] W. Salle,[87] Wagner[88]).

The best method has yet to be ascertained by further investigations. Contrary to a former view, it is generally admitted that injections subcutaneously are well born without signs of suppuration. Insoluble thorium preparations when injected under the skin, however, engender an inflammatory process, hyperemia, caryolysis, necrosis, increase of fibroblasts, and finally proliferation of connective tissue and the formation of scar tissue (Prado Taglo[76]). With toxic doses intense morphological changes have been observed (Orth,[89] Gudzent,[90] Bickel,[80] Plesch,[12] Hirschfelder and Meidner,[91] Pappenheim and Plesch,[92] Loehe,[93] Salle and Domarus[215 219]). Among the post-mortem findings, necrotic changes in the gastrointestinal tract, liver, kidney, with cloudy swelling, marked destruction of the pulp of the spleen, atrophy of that organ, disparation of the adenoid tissue, marked degeneration of the suprarenals, hemorrhagic diathesis, disintegration of the bone marrow, hemorrhages in the lungs, liver and kidneys, have to be mentioned. However, if, owing to the lack of experience, it happened that the emanent powers and energies of thorium preparations have been underestimated, greater precautions have been taken in order to avoid undesirable and fatal results. Thorium, like all other poisons, means a double-edged knife, which can be used only in proper doses. The entire thorium treatment is still in its experimental stage, and also an individual susceptibility for that remedy has to be considered (Gudzent, Plesch,[12] Sticker[214]). It must be remembered that large doses, frequently repeated, 300,000-500,000 M. U., given by mouth seemed to cause slight digestive disturbances (v. Noorden[69]), anorexia and nausea. Similar symptoms as nausea, dizziness, malaise were observed by Czerny and Caan[95] after the administration of 1-3,000,000 M. U. intravenously. This does not happen with smaller doses from 50,000-100,000 M. U. Although no cardinal difference seems to exist betwen the intravenous or subcutaneous introduction, the rapidity of elimination must differ in both methods. Medical science will be mostly indebted to the clinics of Krause, His and v. Noorden and others for their research work in thorium therapy, which was started independently of each other about the same time. Probably with our increasing understanding of the qualities of thorium, this method of treatment is likely to gain in importance. This assumption is justified by the possibility of an

accurate dosage, the rapidity of action, the easy form of employment and last, but not least, the relative smaller price of thorium preparations.

BIOLOGICAL THERAPEUTICAL CONSIDERATIONS.

Under this caption we shall briefly review the biological and therapeutical properties of radium and thorium products. As has been seen, the curative value of radium containing minerals thus receive their scientific confirmation. Some authors (Dautwitz[260]) were surprised at hardly seeing any cases of gout, rheumatism or neuralgia among the miners of Joachimsthal, although their work offered them plenty of opportunities for being exposed to humidity, cold, drafts and exposure of various kinds. Again, long before anything was known of the existence of radium and the radioactive qualities of pitchblende, people of Joachimsthal used pitchblende enclosed in little bags of leather for relief from headache and neuralgias of all kinds with excellent results (Havorka and Kronfeld[256]). The reputation of certain mineral waters, which chemically were found very poor, was revealed later by their high radioactivity, which should remind us that often empirism and good observation power of our ancestors preceeded our scientific knowledge for years, even for centuries, and that it is not well to make light of a knowledge which lacked the advantages of our present laboratory and scientific devices.

Action Upon Growing Cells.

Radium emanation in small doses exerts a stimulating influence upon growing plants (Winkler,[96] Fulton and Schwarz[174]), whilst stronger doses check the growth of vegetable and animal cells, eggs and embryos (Winkler, Molisch,[97] Bauer,[98] Hertwig,[99 238] Halban,[198] Hertwig, P.,[223] Kahn, Fr.,[233] Hertwig, G.,[239] Sommer[247]). This is also true of thorium X acting upon seeds (Bickel and King[100]). Radium emanation acting upon the ovaries and the uterus of rabbits increases the function of these organs (Fellner and Neumann[101]).

Action Upon Micro-organisms.

The alpha rays from radium have a checking influence upon certain micro-organism (Chambers and Russ,[165] Omelianski,[177] Pfeiffer and Friedberger[186]), *i. e.*, gonococci (Fabre[102]). For most pathogenic organism, however, as coli, typhoid bacilli (Iredell and Minett[107]), tubercle bacilli (Becquerel,[222] Wolff,[103] Caspari,[104] Brieger,[105] Orszag,[106] Frouin[236]), bacillus prodigiosus (Caspari[104]), such a bactericid influence must be doubted (Lazarus,[19 38 56] Loewenthal[67]). If such an influence can be admitted (c. v. Klecki[108]), it must be due to a stimulating influence of emanation upon the phagocytic power of the white blood cells. Thorium, also, has no bactericid power upon coli bacilli (Plesch and Karczag[12]). Radioactive substances have been used successfully in cases of acute and chronic suppurations (Schücking[52]), conjunctivitis, phlegmons, ulcer of the leg (Friedrich,[66] Neu-

nanowitz,[39] Plagemann[109]), chronic bronchitis, sinusitis; also indicated by Bulling.[40] In tuberculosis, notwithstanding the favorable reports from Bernheim[110] with dioradium in tubercular peritonitis (Neusser[251]), Thor. nitrate vapors in pulmonary tuberculosis (Gordon Shapp[255]), those of Soddy[254] in tubercular larynx, several authors (Brieger,[105] Orszag,[106] Fleckseder[201] and others) recommend the greatest care in resorting to such treatment. (See contraindications.)

Action Upon Ferments.

Radioactive substances, especially radioemanation in weak doses, exert a stimulating influence upon the action of pepsin, of the pancreatic ferments, upon the fermentation of lactic acid (Braunstein and Bergell,[111] Bergell and Bickel,[112] Richet,[113] Loewenthal[67]). In larger doses emanation as well as radium salts check the pepsin action (Ravenna[114]). Pure radium preparations, containing no decomposition products (Bickel,[115] Th. R. Brown[116]), have no activating influence upon the ferments. Diastatic and autolytic ferments become activated by radioemanation (Loewenthal[67]). The same effects can be observed with thorium emanation, particularly the alpha rays (Bickel and Minami[74]).

Action Upon the Caloric Metabolism.

Inhalation of radioemanation is followed by a rise in body temperature for the first hour, whilst afterwards a drop of the body heat can be noticed. The same drop is observed after the administration of radioactive solutions by mouth (Darms[117]). Emanation introduced into the body increases in many instances the respiratory gas metabolism (Kikkoyi,[118] Bernstein,[119] Silbergleit,[120] J. v. Benczur and D. Fuchs[209]). Persons remaining in the emanatorium for two hours daily in an atmosphere averaging 119-440 M. U. per liter presented an increased output of about 27 per cent. Such a result would only be obtained in persons treated with thyroid gland. It is generally admitted that weak doses of emanation, as 2 M. U. per liter air, have no effect whatsoever (Loewy,[121] Plesch[12]). As according to some writers (His,[33] Kaplan,[203] etc.) fat and nitrogen metabolism are increased by radioemanation, such a treatment would be indicated in cases of endogenous adiposity (v. Noorden and Falta[189]). Probably thorium treatment would be better on account of the longer lasting effect of emanation within the body (Plesch[12]). Such a treatment would, therefore, be contraindicated in cases of severe diabetes, in Graves' disease and in febrile conditions, where we have already an undesirable increase in metabolism.

Action Upon Metabolism of Proteids.

In most of the cases examined an increase in proteid metabolism was observed. Therefore, radioactive treatment is indicated in gout and in many conditions dependent upon old age.

Metabolism of Carbohydrates.

The respiratory quotient during emanation may show a considerable increase (Stähelin and Masse,[204] v. Noorden), so there must exist a greater mobilization and ozygenation of carbohydrates. Lepine[122] (Wohlgemut and Engelmann[171]) also explains this effect by an activation of a glycolytic ferment. In a few instances Reicher[123] noticed a diminution of the blood-sugar. Such facts, however, do not give an indication for the use of radioactivity in all cases of diabetes mellitus. In the latter disease the therapeutic aim must be to reduce the production of sugar; a demand for a higher oxygenation does not exist. Although several instances of the favorable influence of the inhalation and the drinking of radioactive solutions are found in the literature (His,[125] Armstrong,[50] Loewenthal,[124] Gudzent,[211] Fränkel[213]), little or no benefit has been recorded (Reicher,[123] Umber,[123] Poulsson,[127] v. Noorden and Falta[189]), and even cases are on record where radioactive treatment can favor an increase in the production of sugar as well as that of acetone, which fact is explained by an impoverishment of the liver in glycogen. Experiments with thorium X (Plesch[12]) have shown an increase in the decomposition of cane sugar, whilst mono and disaccharides remained unaltered. So far as known, thorium has not yet been used in the treatment of diabetes.

Metabolism of the Purinbodies.

The action of radioactive substances upon uric acid and the oxypurins have already been mentioned (page 108). Although the opinions advanced upon that subject are not yet uniform, different authors (His,[4] Messernitzki,[5] Kemen[22]) maintain that with radioactive treatment a considerable increase in the output of uric acid can be observed (Kaplan[203]). In certain cases treated with high doses of radioemanation the difference may be as high as 100 per cent. According to recent investigations, it would seem that radioemanation stimulates the uricogenic ferment, whilst no particular action would be observed with regard to the antiuricogenic ferment (Schulz[227]). Experiments upon animals (Engelmann,[128] Toffanow[169]) have shown that subcutaneous depots of uric acid undergo rapid resorption if radioactive water is given, whilst in control no change is observed whatsoever. In the blood a diminution, and even a disparition, of the uric acid in the blood could be observed (Klemperer[129]). This does not take place in all instances, as negative results have been recorded (Brasch[130]). We must not forget the technical difficulties of a reliable quantitative determination of uric acid in the blood (Lazarus[38 56]). Even clinically, gout may be improved during radioactive treatment, and still there may be found no change in the amount of uric acid in the blood (Mandel,[131] Lazarus,[38 56] Brasch[130]). The question remains still undecided whether uric acid in the blood means only a pathognomonic sign for gout (Krehl[132]), and whether the disparition of that substance, which

may occur under an exclusive dietetic treatment, can be identified with a cure of gout or not.

Radioactive substances may either favor a better elimination of uric acid, or they may increase the production of uric acid. The latter possibility, the change in the metabolism of purin substances, may be due to the direct influence of radioactivity upon ferments (uricolytic ferment from Lepine, His and Gudzent). It seems certain that these changes are in relation with the considerable action of radioemanation upon the leucocytes, as will be seen later. His[4 33] and Gudzent,[3 34 60] later on Armstrong,[50] Burnham,[163] Lowe,[164] were very much in favor of radioactive treatment in gout; this on account of the clinical improvement, the increased elimination of uric acid, the disparition of tophi observed in cases of gout. The question whether any accumulation of emanation in the blood serum takes place (see below) is still under discussion. Some authors (Kraus,[136] Cohn[133]) do not ascribe to radioactive substances any specific influence upon metabolism of gouty patients.

Thorium X also exerts a powerful action upon the molecule of uric acid (Falta). There is a considerable increase in the output of uric acid (from 0.17 gr. to 0.8 gr. a day). The elimination of the endogenous purinbodies also is increased (Plesch[12]). This period of increased output of uric acid is followed by a striking period of reduction, and it can be explained by the more far-reaching destruction of thorium X upon the molecule of uric acid (Falta[36]). Based upon these facts, the radioactive treatment in cases of gout was justified (Neusser,[251] Gottlieb,[250] His,[4] Strassburger,[21] Harret,[134] Jansen,[135] Sommer,[43] Fuerstenberg,[47] Ashoff,[44] Bulling,[40] Kemen,[136] Scholz,[27] Goldberg,[166] Mannes and Wellmann,[167] Weisz,[168] Georges,[216] Messernitzki,[217] Gudzent,[218] Laqueur,[258] Loewenthal[244]). As in these experiments the old rules of dietetics were still maintained, the decision becomes difficult as to what percentage of the success can be attributed to the radioactive treatment itself. A certain reserve is still indicated, the more as weak emanatories have certainly been overestimated in their effect upon gouty patients. Strict diet is still an important factor, just as before. Van Noorden's diet for gout and the possibility of purin-free diet, which gradually increases the tolerance for purin bodies (Lazarus,[38 56] Brugsch[137]). In the administration of radioactive treatment, the drinking of radioactive solutions seems much recommended (Lazarus[38 56]). Some authors (Baechhold and Ziegler[138]) recommend even a continuous use of radioactive substances, in order to keep the body under continuous action of radioemanation. Good effects are to be observed in cases of atypical chronic gout, in which the pains and diffuse swellings are relieved. The opinions regarding the favorable effects of weak or strong emanation upon tophi in a quiescent stage still differ. In rheumatism, as in neuralgias and myalgias, the increase of pains and the more pronounced swellings prognosticate a good therapeutic result. Acute attacks of gout are

not much influenced by radioactive treatment. Given at the time of the attacks, these are more aggravated in comparison with former manifestations. The experiments, which prove a more favorable action of thorium X upon the gouty process, must be followed with interest. This in particular on the tophi of the ear, according to observations collected from Falta.[36 221] It is well to remember that thorium X treatment may produce the onset of an attack of gout (Gudzent[3]). In gouty kidney and in cases with tendency to nephrolithiasis, the radioactive treatment requires great caution on account of the large amount of uric acid with which the kidneys are flooded after this treatment. This may even form a contraindication. At any rate, large doses of alkali must be given at the same time, as radioemanation has a tendency to increase the acidity of the urine. Whether the observed hematurias have any connection with the treatment given has to be decided by further investigations. The blood analyses made with reference to the amount of uric acid are doubtless of great scientific interest. More recent indications make it advisable not to consider the amount of uric acid found in the blood as an indicator for the welfare or the danger of the gouty patient. With manifest symptoms of gout present, the amount of uric acid may not be found higher than in normal conditions, and vice versa. It seems that the analysis of uric acid in the blood has more a diagnostic value. For instance, in a case where the kidneys are normal, a diet rich in purin bodies, the blood is found about normal with regard to the amount of uric acid. This test for the presence or absence of gout is certainly valuable. This determination becomes important in cases of gouty myalgias and neuralgias, which for a long time precede the characteristic attack. It is evident that a positive result of the blood analysis is more valuable in cases that for a longer period have been kept on a purin-free diet.

Influence Upon the Blood.

The opinion of Gudzent[34] and Marckwald,[139] that radioemanation is stored up and retained for a long time in the blood, is still under discussion. The experimental results, however, show that after inhalation the emanation is rapidly eliminated through the lungs (Fleischmann,[17] Kemen,[22 136] Kionka,[13] Lazarus,[38 56 199]). Emanation given by mouth seems to remain for a few hours within the body, and is therefore more effective (Fleischmann,[17] Kemen,[22 136] Pieper,[140] Kionka[13]). Inhaled by baths, within the first hour a moderate accumulation can be expected (Kemen[22 136]). Large doses of radioemanation (injected and by mouth) increase the coagulability of the blood, which is probably due to the increase of ferments (Von den Velden[141 240]). Thorium X, however, lessens the coagulability of the blood and favors hemorrhages (Domarus and Salle[87]). Upon the red blood cells of normal human beings and animals great quantities of emanation, medium doses of radium salts injected subcutaneously or persons who

handle a great deal of radium salts and radioactive solutions have a decided influence. A similar effect can be obtained by induced radioactivity (Farnau, etc.[228]). According to the dose given, hyperglobulia, which may last for several months, is the result. Evidently the radioactive substances exert a very stimulating effect upon the hemopoetic organs. Small doses have a stimulating, high doses exert a destructive, action upon the red blood cells, so that the formation of new blood may be checked, and even a destruction of the hemoglobin may result (Giacchi,[142] C. Neuberg and Karczag[237]). As demonstrated by Knaffl Lenz,[37] high doses of emanation cause hemolysis in guinea pigs' blood. Similar effects are obtained with thorium X, the more if we remember that in the bone marrow this substance is accumulating (Klemperer,[82] Prado Taglo,[15] Plesch,[12] Hirschfeld and Meidner[91]). These facts must always be borne in mind when radioactive treatment is applied, as it is most dangerous in cases where the hemopoetic function of the bone marrow has already much suffered in advanced stages of disease. It is contraindicated in Bantis' disease and far-advanced cases of pernicious, secondary and cachectic (carcinomatous) anemias. Although favorable results have been reported in pernicious anemias by radio and thorium treatment (Gudzent,[3 60] Plesch,[12] Bickel[143 229]), the later results (Klemperer[82] and Hirschfeld,[83 224] Minkowski[79]) emphasize that great precautions must be observed with such a treatment, particularly in far-advanced cases. In anemias of children, with splenomegaly, thorium X treatment may increase the red blood cells (Plesch[12]). Radioactive solutions given by mouth seem to be less dangerous and more effective (Bickel[143 229]). If in pernicious anemias a favorable result with radioactive treatment can be observed, we must not forget that by the ordinary methods of treatment favorable and spontaneous turns can be observed (blood crises). Radioactive and thorium X treatment are still methods of experimental studies, but merit our attention. A final conclusion with regard to its definite value cannot yet be advanced. The injections with radium salts still present a safer, although more expensive, method of treatment, owing to a selective influence upon the erythroplastic system in doses without harmful effect upon the red as well as upon the white blood cells. However, it seems that large doses, probably 1/10 mgr. or more, are required, a factor which needs consideration.

The white blood cells are equally susceptible to radioactive substances. Small and medium doses of emanation also induced radioactivity (Farnau[228]), have a slight or no effect upon the total number of white cells. Frequently an increase of the eosinophiles is noticed (Gudzent,[60] Miss Levy[144]). Whether asthma, in which condition a hypereosinophilia is encountered, can be favorably influenced by radioactive treatment remains still doubtful (v. Noorden[69]). Only in one instance, in v. Noorden's clinic, where such a condition combined with a chronic inflammation of the knee existed, was a favorable result noticed. Large doses of radium and

thorium X cause a decided leucocytosis, which stage is followed by a marked leucopenia, so that even no leucocytes may be found in the circulating blood (Gudzent,[78] Falta,[36] Engelmann,[145] Pappenheim and Plesch,[92] Klemperer[82]). Quantitatively, the polymorphenuclears are increased, the lymphocytes are diminished. Whilst monocytes, eosinophiles, mastcells, special leucocytes, lmyphocytes have already disappeared, the leucocytes are less vulnerable (Pappenheim and Plesch[92]). Animal experiments and postmortem findings after overdoses of thorium X had been given can be summarized as follows (especially with thorium X): Necrotic changes in the gastrointestinal tract, liver, kidneys with cloudy swelling, marked destruction of the pulp of the spleen, atrophy of that organ, disparition of the adenoid tissue, marked degeneration of the suprarenals and of the chromophil system, hemorrhagic disintegration of the bone marrow, hemorrhages in the lungs, liver and kidneys.

Notwithstanding the unappropriate dosage of thorium X, this substance has been used in cases of leukemia, so far as seen from the early reports, with favorable results (Falta and Freund,[36] Plesch,[12] Gudzent[60]). We have to consider whether a stimulating or destructive action of thorium X is desired. In certain cases, however, of leukemia, in relapses thorium X has only a temporary effect, so that the other methods of treatment cannot be discarded (Klemperer,[82] Hirschfeld,[83 224] Minkowski,[79] Nagelschmidt,[86] Plesch,[12] van Noorden, Türck[235]). Just as in far-advanced cases of anemia, also in far-advanced cases of leukemia, thorium X treatment cannot be used. If thorium X and radioactive substances cause a destruction of the white blood cells, and if there is noticed an increased output of uric acid in the urine, perhaps this fact may be due to an overproduction of uric acid resulting from the destroyed white blood cells. The possible freeing of ferments from the leucocytes may also entertain a more active metabolism in gouty patients. If in certain experiments (Klecki[146]) pathogenic bacteria are more easily rendered inactive by phagocytosis, radioactive treatment may have its value in favoring a leucocytosis and phagocytosis.

Radio and thorium treatment have been extensively used in swellings and tumors of the lymphatic glands, but as the discussion of these results does not belong to internal medicine, the mentioning of such possibilities will be sufficient.

[NOTE.—A complete list of the references to this article will be published in the June issue, when the article is completed.]

(*To be concluded.*)

Book Reviews.

International Clinics. Edited by Henry W. Cattell, A.M., M.D., Philadelphia. Volume III. Twenty-third Series. Cloth, $2 net. Philadelphia and London: J. B. Lippincott Company. 1913.

Volume III, twenty-third series of "International Clinics," contains a number of articles well worth spending some time with. The article on "The Prophylaxis and Treatment of Malarial Infections," by Charles F. Craig, Captain, Medical Corps, United States Army, shows a firm grasp of the subject. Captain Craig is an authority on tropical medicine, and especially malarial diseases; therefore, an article from his pen cannot be otherwise than authoritative. We were especially impressed with his statement—though everybody recognizes the vital importance of preventing malarial fever—that in many sections of the United States but little has been accomplished in the prophylaxis of these fevers. He even declares that many localities in our southernmost States are practically uninhabitable by reason of the severity of the malarial infection there present, while in others the inhabitants lead a wretched existence, made miserable by frequent and repeated attacks of malarial fever. We were still further shocked by the declaration that within recent years much money and labor have been expended in an effort to eradicate the hookworm, but very little has been accomplished or undertaken in the eradication of malarial disease, of vastly greater importance, in his opinion, than hookworm infection. The article then outlines a scientific plan by which miasmatic infection can be absolutely controlled; then discusses in turn the prophylactic use of quinine, proper treatment of the carriers of the infection and of initial infections, education of the public and the treatment of malarial infection. Though malaria is not as prevalent in Maryland as formerly, still it occurs sufficiently often for the physicians of our State to keep themselves abreast of the latest information in matters malarial. Another article which should receive some attention is "Remarks On a Clinical Study of Uncinariasis and Its Treatment," by Bailey K. Ashford of the United States Army Medical Corps, who did so much to bring hookworm under control in Porto Rico. Besides these, there are a number of other articles which no doubt will prove not only interesting, but instructive to the general practitioner.

International Clinics. Edited by Henry W. Cattell, A.M., M.D., Philadelphia. Volume IV. Twenty-third Series. Philadelphia: J. B. Lippincott Company. Cloth, $2 net. 1913.

The present volume of the above popular series should meet the demands of the most fastidious connoisseur. Here is to be found a collection of articles in medicine, surgery and the specialties that

are of a most advanced character. Perhaps the most entertaining and instructive as well as interest-provoking article is that of F. Proescher of Pittsburgh, Pa., entitled "Azurophile Micro-Organisms," or etiological studies on rabies, poliomyelitis, and variola. For many years a host of investigators have been endeavoring to discover the etiological factors in these diseases, and sporadically one will be informed that the causative agent has been discovered. So, here again the announcement has gone forth that by certain methods which the author has fully described the ultra-organisms producing these maladies have been discovered. The author summarizes as follows: My tinctorial studies of the etiology of smallpox, poliomyelitis and rabies have demonstrated that these micro-organisms, which are more or less filterable and classified as ultra-microscopical or invisible viruses, can be made visible with certain dyes belonging to one and the same group of aniline dyes, and that filterability should not be confounded with microscopical invisibility. The term ultramicroscopical or invisible virus should be discarded. We have seen that the actual pore size of porous filters of whatever make is about 0.2 micron. The smallest forms of rabies, poliomyelitis, and smallpox virus are less than 0.2 micron in length. The poliomyelitis virus is the easiest to filter. It passes through the Berkefeld, Chamberland, and Pukal filters with the same ease, while the rabies and variola virus will pass only the Berkefeld filter V, and then only by thorough emulsification of the material. The filtration of the latter two viruses could not be confirmed by any investigators, in spite of using the same filter and technic.

The cause of many failures in filtration cannot be definitely ascertained, but it seems that not the filter alone nor the intracellular location of the virus is responsible. The chief reason seems to be that the peculiar structure of the micro-organisms, not their size, allows them to pass through the pores of the filter. The invisibility of these micro-organisms while alive must be due to high light refraction. For instance, in spite of the infectiousness of the otherwise sterile contents of variola pustules, no micro-organisms can be seen with our ordinary microscopes and highest magnification and slant illumination.

The content of the variola pustule is most favorable for direct observation on account of the small amount of its cellular detritus, which allows us, per analogian, to conclude that other filterable viruses in a living condition are also highly refractible and invisible with our common methods. The cellular detritus in the virus of rabies and poliomyelitis hinders the direct observation of the micro-organisms.

Filterable viruses are distinguished from other micro-organisms by the formation of more or less specific cellular inclusion products. These inclusions, which have a peculiar location in each disease and more or less specific staining properties, were once considered to be a certain developing stage of the virus, but are

now regarded as cellular reaction products formed by the virus from the cellular contents. No other known micro-organisms produce such cellular reaction products, even by parasitimus in lower vertebrates.

Prowazek designated the filterable viruses as chlamydozoa, which means micro-organisms which lead to the formation of peculiar reaction products in which they are isolated and included.

According to Prowazek, the chlamydozoa are more nearly related to protozoa than to bacteria. They are cell parasites, the cells responding to the invasion of the virus by a production of characteristic reaction products which, as a rule, have an affinity for nuclein stains.

The cellular reaction products found in hydrophobia are probably derived from the nuclei. The reaction products are located in the eotoderm, in the epithelial cells in vaccine, scarlatina, in the nerve cells in rabies.

In spite of their constancy, these reaction products cannot be the causative agents in these diseases. These inclusions are called Guarnieri bodies in vaccine and variola, Negri bodies in rabies. After the destruction of the Guarnieri bodies in vaccine with 20 per cent. sodium hydroxide, a positive inoculation can be made. The appearance and structure of these bodies speak against their protozoic nature. They have no protoplasm structure. They are hyaline, and the changes which are interpreted as developing cyclus are only degenerative processes.

My investigation has confirmed Prowazek's prediction that the viruses which form intracellular inclusions must be intracellularly located.

Certain conclusions may be drawn from the staining properties of these micro-organisms as to the chemical composition of the protoplasmic substances. The facts that the thiazine dyes are soluble in neutral fats and higher fatty acids, that the micro-organisms are stained either metachromatic or the same color as the polymerized base, that they are only stainable with the watery solution of the free base which must be anchored by a lipoid substance in which the polymerized base is only stable, suggests that the protoplasmic substance must be a peculiar lipoid protein. The chemical nature of this lipoid substance cannot be determined until we have a pure culture of these micro-organisms. But the lipoid nature satisfactorily explains the peculiarities of these viruses. The lipoid substance lessens the cohesion and gives a greater plasticity, which allows the micro-organism to conform to the pores of the filters. It explains their invisibility in a fresh condition, the lipoid substance having high light-refracting properties. It explains their resistance to drying and freezing, and the preservation of the virulence by the action of glycerine. They may be designated azurophile micro-organisms because of their peculiar staining properties.

Whether the findings of Proescher be confirmed or disproven,

he has done good work and his article should stimulate other workers in the same line to renewed activity in penetrating the mysteries of these diseases.

Essentials of Prescription Writing. By Cary Eggleston, M. D., Instructor in Pharmocology, Cornell University Medical College, New York City. Philadelphia and London: W. B. Saunders Company. Baltimore: The Medical Standard Book Company. 1913.

This little volume will be found of much service by students and nurses in learning the elements of prescription writing. Though small, it meets all requirements for student purposes. It is a guide which if followed will enable the student to grasp in the least possible time the elements of proper prescription writing, an art which is fast dying.

The Principles of Pathologic Histology. By Frank B. Mallory, M.D., Associate Professor of Pathology, Harvard Medical School; Pathologist to the Boston City Hospital. With 497 figures, containing 683 illustrations, 124 in colors, and all but two original, printed directly in the text. Philadelphia and London: W. B. Saunders Company. Baltimore: The Medical Standard Book Co. Cloth, $5.50 net. 1914.

Dr. Mallory believes that pathology can only be appreciated by students when they have mastered a thorough conception of the picture they are studying as an end product by being capable of mentally picturing the lesson in its various stages of development. He is convinced that students should be able to mentally trace backward or forward the probable steps of the specimen they are studying. He has, therefore, made a book on pathology from the morphologic standpoint, constantly bearing in mind the biologic side of the subject, first by ascertaining so far as possible the cellular elements out of which the various lesions are built up, and then by tracing the development of the lesions from the simplest to the most complex. In other words, he is satisfied that it is necessary in order to understand an end result, such as sclerosis of an organ or tissue, to study all of the acute lesions which may terminate in sclerosis. The author opens with a thorough discussion of inflammation in its various phases and the several forms of degeneration. He then passes on to the special injurious agents and the lesions they produce, namely, staphylococcus, pyogenes aureus, etc., giving a graphic account of the micro-organism, toxin, injury produced, reaction termination of lesion, special forms of lesion, such as furuncle, carbuncle, osteomylitis and septicemia. Next, he turns his attention to tumors, of which he states we know a great deal about the gross and microscopic appearance of tumors and in regard to their classifications, but nothing in regard to their cause and little in regard to their origin. This section of the book, some 160 pages, is delightfully written.

Though condensed, one is thoroughly impressed with its simplenes and directness of style, as well as the meat therein contained. No frills or furbelows are employed, but every sentence made to play its part in unfolding the subject.

Part II of the book is devoted to special pathologic histology, viz., organs of circulation, of respiration, of digestion, and the genito-urinary organs, the blood-making, etc.

The book is bound to impress the thinking with the logicity of its arrangement, the directness and plainness of statement, and the earnestness of the writer, who has handled his subject charmingly. Not only should the work appeal to student, but also general practitioner and teacher.

ANNALS OF SURGERY. Philadelphia: J. B. Lippincott Company. Single issue, 50 cents net.

It gives us great pleasure to especially commend to our readers the December issue of "Annals of Surgery." It is an exceptional issue, devoted almost entirely to anesthesia, the articles being from the pens of the most noted experts in this line in the United States, viz.: Connell, Gwatmey, Honan, Janeway, Cotton, McMehhan, etc. As every practising physician finds it necessary to upon occasion use some form of anesthetic, none should be without this issue of the "Annals of Surgery."

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BALTIMORE, MAY, 1914

THE MIDWIFE PROBLEM.

DOUBTLESS Maryland is better protected along this line than many of her sister States, nevertheless there is still much room for improvement. Here the midwife before licensure must have been in attendance on at least five labor cases, must have passed an examination before the State Board of Health. She can attend only normal cases and must call a physician for abnormalities. Above all, if the baby be suffering with sore eyes, she must solicit the aid of a physician. Under no circumstances can she apply instruments or engage in abortion. If she violates any of these laws she is liable to a fine of $5 to $10, and for the third offense forfeiture of license. Therefore, the women of Maryland who are compelled through the force of circumstances to resort to midwives are fairly well protected against unfortunate outcomes. Still, one would be idiotic to dream for a minute that Maryland's midwife law is ideal. It is the best that could be gotten at the time. It was a compromise, and the time is fast approaching when the profession will have to attack the problem again in order to better the present law if Maryland is to take her place with other States. The problem is actual, not theoretical, and must be reckoned with. What is the best procedure to take? Broadly speaking, three standpoints are taken in this country. First, the midwife must be abolished. Second, the midwife had best be ignored and left to her own devices. Third, the midwife should be raised to a higher plane by proper State control and education. It is interesting to learn that the authorities of Bellevue Hospital of New York are alive to the necessity for improvement in the education of midwives and have inaugurated a School for Midwives. This seems to be the proper course to follow. The midwife is with us, she is a necessary institution, and as such demands recognition. If she must be tolerated, and no one would be foolhardy enough to say she must not, the medical societies must have laws enacted compelling those who desire to engage in midwifery to undergo a thorough course of instruc-

tion in recognized hospitals. In this manner the standard of those engaging in the practice of midwifery will be elevated and the public will derive better service. In order to spread broadcast this propaganda the Committee for the Prevention of Blindness of New York has caused to be issued a pamphlet comparing the American with the English method of handling this problem, in which it strongly recommends that the most satisfactory way to abolish the more objectionable part of the midwife problem is to recognize the midwife, place her under control and state educational requirements, and to elevate these latter to such a height that only safe and intelligent midwives shall remain in practice. Somewhat similar measures have recently accomplished much for medicine in this country. Witness the fewer medical schools, fewer and better medical men graduated from the schools, and a general uplift along all medical lines. With the uplifting of the midwife in view, Miss Van Blarcom, as executive secretary of the Committee for the Prevention of Blindness, was commissioned by the committee to visit England during the autumn of 1911 to study the working of the English Midwives Act of 1902. The results of her labors are set forth in the above-mentioned pamphlet in a concise withal comprehensive manner. Here we are furnished with a concrete example of how the midwife problem has been successfully solved by another English-speaking country; how the problem is not so difficult of solution as at first sight it would appear, and how this country, with all its vaunted progress, is at least a decade behind England in this matter. So far as the author was able to ascertain, the United States is the only civilized country in the world in which the life and health and future well-being of mothers and infants are not safeguarded so far as possible by statutory requirements for at least the training and licensing of midwives. The author has gone thoroughly into the many phases of the problem, and through her experience with the practical working of the English law is enabled to offer many suggestions for the betterment of ours. The attitude of the medical profession of this country has always been to stand behind any movement which tended to promote the public health. Here is a problem which needs the support of the profession. We issue the appeal that each and every physician get behind the movement of fortifying the midwife law. It is a national problem and concerns each one of us. In order to fully understand the magnitude of the problem we earnestly commend this pamphlet to those interested in solving the problem.

Medical Items.

Dr. J. Charles Macgill, who has been confined to his home at Catonsville with an attack of influenza, is very much improved.

Dr. Thomas W. Koon has been elected Mayor of Cumberland.

The second semester of the Johns Hopkins University began Thursday, April 16.

Dr. Leonard G. Rountree, associate professor of experimental medicine; Dr. E. T. Marshall, associate professor of physiological chemistry of the medical department of Johns Hopkins University; Dr. J. C. Keith of Johns Hopkins Medical School, and Dr. Samuel Amberg, director of Otho S. A. Sprague Memorial Institute Laboratory of the Children's Memorial Hospital of Chicago, spent their Easter vacation at Trinity Cottage, near Springfield, West Virginia.

An active campaign to raise $320,000 to relieve the indebtedness of Mercy Hospital and help make necessary improvements was started recently. Active in the campaign are many men and women widely known in professional business. They have 1000 workers who will strive to collect the amount before May 5.

The position of Secretary to the Board of Health and Health Officer of the City of Cumberland, Allegany county, Maryland, will be vacant after May 1, 1914. Applicants must be trained sanitarians and bacteriologists, devoting their entire time to the office. A good salary is provided. File applications with or write for further information to the Board of Health, Cumberland, Md.

Medical and newspaper men met April 7 to discuss a plan for closer co-operation between the medical profession and the newspapers of the city. An agreement was approved that a definite method of co-operation between the two professions be formed and a central authority established to assist actively the newspapers in getting accurate and educative information before the public.

The Washington County Anti-Tuberculosis Society has leased the Dr. Herman R. Eavey building, where it will maintain permanent quarters, in charge of Miss Nellie Casey, the county health nurse. Clinics are held under direction of a committee appointed by the Washington County Medical Society.

Dr. Winford H. Smith, superintendent of Johns Hopkins Hospital, was the principal speaker at the luncheon of the Women's Civic League, which was held on the fifteenth floor of the Fidelity Building April 25. His subject was "Sydenham Hospital and Its Needs."

Dr. Horace M. Simmons, former editor of the Maryland Medical Journal, and later associated with the *Hygienic and Dietetic Gazette,* and Mrs. Simmons, who have been spending some time in California, sailed on March 5 on board the Mongolia for Honolulu. They will also visit China and Japan.

Dr. Sidney H. Adler, University of Maryland Medical School, '07, of 2493 Broadway, New York city, who has been assistant to Dr. Samuel G. Gant of that city, has been appointed proctologist at the West Side German Dispensary.

Dr. Frederick Caruthers of 2229 East Baltimore street, who for the last seven weeks has been in Franklin Square Hospital undergoing treatment for an abscess of the jaw, has sufficiently recovered to leave the hospital.

Dr. Samuel C. Chew, who has been ill at his home, 3 Midvale road, Roland Park, is recovering.

At the annual meeting of the Board of Managers of the Baltimore Manual Labor School for Indigent Boys, held recently, Dr. Joseph T. Smith of 1117 North Eutaw street was reelected president. He was also named one of the directors.

The directors of the University of California, after looking over the relative attainments of many hospital organization specialists throughout the country, have selected Dr. Winford H. Smith, superintendent of the Johns Hopkins Hospital, to act as consultant of building organization and administration plans of the new $1,000,000 hospital to be erected in San Francisco in connection with the university. Dr. Smith has left for San Francisco and will be gone about two months. During his absence Dr. Rupert Norton will be in charge. During the last three years Dr. Smith has helped to plan the Phipps Psychiatric Clinic, the Harriet Lane Children's Hospital, the Brady Urological Clinic, and the Marburg Ward, the four big departments of the Johns Hopkins Hospital.

The thirty-ninth annual meeting of the American Academy of Medicine will be held

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in Atlantic City, June 19 to 22, 1914. With the exception of the Sunday afternoon conference, the various sessions will be held at the Hotel Dennis, which also will be the Academy headquarters.

Dr. J. McPherson Scott, secretary to the State Board of Medical Examiners, has been elected Mayor of Hagerstown for the third time.

Dr. Paul Wegefarth, formerly assistant to Dr. Harvey Cushing at the Peter Bent Brigham Hospital of Boston, has returned to Baltimore, where he will be one of the resident physicians at the Church Home and Infirmary.

Following the meeting of the International Association of Surgeons, which came to a close a few days ago in New York city, a large number—approximately seventy—distinguished surgeons from almost every country in Europe were the guests of the staff of the Johns Hopkins Hospital on the 18th inst. Their visit was for the exclusive purpose of seeing the work of Johns Hopkins Hospital.

In the afternoon Dr. Thomas S. Cullen held a clinic on rare diseases, and Max Broedel, the artist whose work in illustrating technical books on surgery is famous, spoke on the "Relation of Art to Medicine." Dr. W. H. Howell gave a demonstration in physiology and Dr. J. J. Abell in pharmacology.

The most important demonstration of the morning was by Dr. L. C. Rountree, associate of Dr. Abell, and Dr. J. T. Geraghty, associate of Dr. Young, on the new method of estimating the functions of the kidneys. At noon a luncheon was served.

Among the distinguished visitors was Professor Schuller of Germany, who, it is said, made the first X-ray of the human brain.

A recital for the benefit of the Maryland General Hospital was given by Mabel Garrison of the Metropolitan Opera Company at the Lyric, Thursday, April 30.

The hospital is preparing to improve its facilities by building a model surgery and nurses' home. The building recently vacated by the Baltimore Medical College is owned by the hospital, and as it adjoins the hospital it can be readily utilized for the extension of the hospital.

The Ladies' Auxiliary of the Hospital has already more than $4000 in the building fund, and it is hoped that the money derived from the entertainment will be sufficient to enable them to begin to build at once.

BIRTHS.

To Dr. Ronald T. Abercrombie, Johns Hopkins Medical School, '05, and Mrs. Abercrombie, of the Homewood Apartments, Baltimore, April 10, 1914, a daughter—Katherine Gordon. Dr. Abercrombie is a member of the faculty of the Johns Hopkins University.

DEATHS.

John G. Huck, M.D., Physicians and Surgeons, '82, of 647 West Lafayette avenue, Baltimore, died from heart disease at the Johns Hopkins Hospital, August 13, 1913, aged 59 years.

Dr. Ferdinand J. S. Gorgas, University of Maryland Medical School, '63, of 508 North Carey street, Baltimore, died at his home after an illness of two years of paralysis, April 8, 1914, aged 80 years. Besides being a medical graduate, Dr. Gorgas was a graduate of the dental department of the Baltimore College of Dental Surgery, and was dean of the dental department of the University of Maryland from 1882 to 1911. Prior to his connection with the University of Maryland, he was dean of the Baltimore College of Dental Surgery.

Oliver Kinsey, Jr., M.D., Johns Hopkins Medical School, '11, formerly of Kinsey, N. C., died suddenly in Washington, March 24, 1914, aged 28 years. Dr. Kinsey was formerly on the house staff at the Church Home and Infirmary.

John Thomas Shepherd, M.D., University of Maryland Medical School, '74, acting assistant surgeon U. S. P. H. S. at Chattanooga, Tenn., from 1888 to 1911; physician in the Hamilton County Hospital, and formerly president of the Hamilton County Board of Health; a member of the Association of Military Surgeons of the United States, a Confederate veteran, died at his home in Chattanooga, March 22, 1914, from valvular heart disease, aged 65 years.

James A. Cole, M.D., College of Physicians and Surgeons, '86, died at his home in Timmonsville, S. C., March 11, 1914.

J. Thor Rohm, M.D., College of Physicians and Surgeons, '80, for thirty years a practitioner of Redding, Cal.; once Mayor of that city, and for one term coroner of Shasta county, died at his home, March 31, 1914, from nephritis, aged 62 years.

J. Thornton Smith, M.D., Baltimore University, '90, died at his home in Chaneysville, Pa., January 31, 1914, aged 64 years.

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AMPUTATION OF THE RECTUM, MADE NECESSARY BY CONDITIONS AT TIME OF OPERATION.*

By J. Dawson Reeder, M.D.
Baltimore, Md.

One of the most satisfactory results that I have obtained in operations upon the rectum is that of amputation in the cases here reported, where there seemed to be no alternative for me at time of operation, and knowing full well that this procedure makes me liable to severe criticism by proctologic surgeons who, as a rule, condemn this seeming more or less hazardous operation, when we consider the possibilities of permanent incontinence which one would naturally expect to occur. The cases herein reported were, with one exception, taken to the operating-room with some special operation in view; but after patients were anesthetised and a complete and thorough examination was made, there seemed no other course to follow than that of complete amputation, which was the application of my experience while working with the late Dr. Tuttle.

The technique was similar (except a few details) in each case, and after consultation at the table with the physician who had turned the case over to me was as follows: A circular incision was made, at or near the muco-cutaneous border, dissecting the anus free from the tissue adjacent; traction was then made upon the lower extremity of the bowel by the application of T forceps and the muscle (sphincter) is put upon the stretch, an attempt to loosen its attachments by blunt dissection generally results in a peeling back of the layer of fibers next to the anal margin, which in the cases here reported was partially accomplished by the condition present at time of operation calling for amputation. After

*Read at annual meeting of the Medical and Chirurgical Faculty, April 30, 1914.

the muscle is freed as much as possible, small retractors are introduced and it is held on each side by assistants and traction is again exerted upon the free end of the bowel, while it is dissected free to the bulging of the peritoneal pouch, which, in one case, was opened and closed by suturing to new bowel surface after sufficient gut had been drawn down to accomplish the desired end in the case.

The lower extremity of bowel after amputating sufficient amount is sutured to the cutaneous margin after the muscle is placed in as nearly a normal position as possible. My results in the cases here reported have been so entirely satisfactory to both patient and myself, so far as prompt healing and good sphincter control is concerned, regardless of the fact that should they live long enough they may each be the victims of anal stricture, I feel justified in reporting my results, as each of these patients were more or less invalids for periods of 5 to 15 years.

While I have always been antagonistic to the Whitehead operation for hemorrhoids because of the scar tissue produced, and feel that it is only justified in a very few selected cases, I realize fully that the operations here reported leave practically the same amount of scar tissue which may be the future seat of contraction and irritation, producing either stricture or malignancy.

Case No. 1.—W. J. K., age 61 years; white male; date, May 4, 1912. Referred by Dr. H. D. McCarty.

Family History: Negative.

Past History: About 30 years ago had first attack of prolapse, and was confined to bed for several days; since that time he has suffered with piles, which would "come down" on him without any warning, but was always able to reduce them in a short while with warm water and vaseline.

Present History: May 4 hemorrhoids prolapsed while at stool about 6 A. M., tried frequently during the day to reduce them, but could not, as the mass was getting larger and harder every hour. Patient suffered greatly until late in the afternoon, when all sensation disappeared, and about 7 P. M. sent for Dr. McCarty.

A short while later I was called, and after an examination had him removed to University Hospital. Patient was placed upon the table at 9 P. M. under ether. Examination showed a prolapsed strangulated rectum, mass larger than two fists, impossible to reduce, as there were several gangrenous areas; mass was hard and covered with mucus and blood. Four large hemorrhoids seen imbedded in the large mass, which were ulcerated and bleeding freely.

Operation: An incision through the median line extending from the anterior to posterior commissure was made, and each lateral half was amputated with curved scissors, leaving a wide raw surface bleeding very freely from numerous thrombosed vessels, which stood out as though injected with wax.

Vessels of each side were picked up and ligated, and free margin of bowel was then sutured to skin surface with interrupted

sutures at about half-inch intervals, as I anticipated slough and infection would follow. Each lateral half was about the size of a large kidney, dark blue in color, and vessels could be felt throughout the entire structure filled with clotted blood, which gave the feeling of vessels in a subject on the dissecting table injected with the heavy wax. Patient was returned to bed in very good condition and was awake in about two hours; complained of no pain whatever, and received no further treatment except dressing upon the third day, followed by Comp. licorice powder every four hours until effectual.

Bowels moved the following day without either pain or the passage of blood, and patient was allowed to get up; wound healed without sloughing and patient was discharged from the hospital on the tenth day.

One year later the patient came to my office by request, and examination and history showed perfect sphincter control, and he has not suffered a single day since leaving the hospital.

Diagnosis: Strangulated prolapsed rectum.

Result: Cured.

Case No. 2.—XX white woman, age 62 years. Referred by Dr. Ashby, University Hospital, Ward K. Diagnosis: Complete prolapse of rectum and cystocele.

Family History: Negative.

Past History: Has had prolapse of rectum for past ten years, following an attack of internal ulcerated hemorrhoids, which were treated by injection method some eight years previously. About time of rectum dropping out, patient noticed a large bulging mass upon straining at stool protruding from the vagina, and had much difficulty in urinating at times. Condition would come on frequently and disappear without any special treatment, except keeping quiet for a few days.

Present History: Patient entered the University Hospital for treatment in the Gynecological Department for cystocele and prolapse of the rectum, which she had been unable to reduce for several weeks. Examination by request of Dr. Ashby revealed a large mass of protruding oedematous rectum, which was bathed in mucous and measured about six inches in length. Cystocele was not visible at this time, as vagina was packed with gauze. Operation was advised, and it was agreed that I should operate at the same time that Dr. Ashby attempted to correct the cystocele.

Operation: Patient taken to the operating-room and anesthetised with ether. Upon examination with parts perfectly relaxed, a large mass was seen to protrude from the vagina, dropping down upon the prolapsed rectum; this was replaced and held by a vaginal packing, and patient turned over to me for first step in the combined operation. Incision was made around the cutaneous margin as above described, and after freeing this portion of prolapse from adjacent structures the sphincter ani was searched for and found to be dilated by the offending mass to such an extent that it was not dissected loose at any point. Im-

mediately there was a dropping of a large mass of invaginated bowel, and peritoneal pouch was bulging through the opening as though the entire pelvic floor had given away, and the amount of prolapse now measured at least seven inches. Peritoneum was then opened and traction made upon the exposed portion of rectum, after the anal end was tied to prevent leakage, until the bowel seemed on the stretch. The peritoneal opening was now closed with catgut sutures around the portion of bowel adjacent, and protruding mass cut off a little flush with the cutaneous margin. This free area after being cleaned was sutured to the skin by interrupted chromocised catgut, and patient returned to bed, Dr. Ashby having decided to postpone his operation to a future date.

Following day gauze plug was removed from the vagina, and on the fourth day bowels were moved by compound licorice powder without any pain; wound healed by first intention, and by end of tenth day she was discharged as far as my duties were concerned. I was told by the Resident that there had not been a sign of the cystocele since the rectal operation, and am under the impression that she was dicharged from the hospital without any further treatment.

During the convalescence the temperature was never above 99.3, and after first bowel movement on the fourth day she had a daily evacuation, followed by an irrigation of boric acid.

Result: Cured.

Case No. 3.—W. P. H. Referred by Dr. Shannon, July 28, 1913. City.

Family History: Mother died age 65, apoplexy; father died age 68, brain trouble; brother died age 12, cerebro-spinal meningitis; brother died age 46, T. B. general infèction; five brothers living and healthy; one sister living and healthy.

Past History: Negative, except 25 years ago was operated upon for hemorrhoids.

Present Trouble: For past five years has suffered continually from prolapsing internal hemorrhoids, and the past two weeks has had prolapse and severe straining, which would take from one to five hours to reduce. Never has a bowel movement oftener than twice in a week for fear of the prolapse and bleeding, which completely unfits him for the remainder of that day.

Examination: Shows complete circle of internal thrombotic hemorrhoids now ulcerated and rectum bathed in pus and mucus.

Treatment: Rectal irrigations for a month; removal advised.

Operation: September 27, 1913, 8.30 A. M., University Hospital. Dr. Reeder, Dr. Edwards, assistant.

After dilating sphincter entire hemorrhoidal area prolapsed, showing ulceration and general breaking down of mucous membrane. Muco-cutaneous border showed a large amount of angiomatous tissue similar to patient's lower lip, which shows a macrocheilia of long standing. Changed from a clamp and cautery

operation to a complete amputation. The tissue after being removed showed a large area bleeding freely and broken down.

Lower end of bowel was very fragile, and tore off frequently when traction was made in suturing it to skin margin. Sutured with catgut and dressed with iodoform plug.

Patient was returned to bed in good condition, awake in about three hours. Bowels moved on the sixth day without the slightest pain or bleeding after the dose of compound licorice powder, followed by warm sweet oil injection per rectum at time of desire to have bowel movement.

Recovery uneventful, and patient dismissed from the hospital on ninth day, to report at office every other day.

Two weeks after leaving the hospital entire area of ulceration completely healed, and he was discharged.

Diagnosis: Prolapsed ulcerated internal hemorrhoids, Lymph-Angioma.

Case No. 4.—C. A. R., age 34 years; occupation, brickyard superintendent. City. Date, February 9, 1914. Referred by Dr. Coleman.

Family History: Negative.

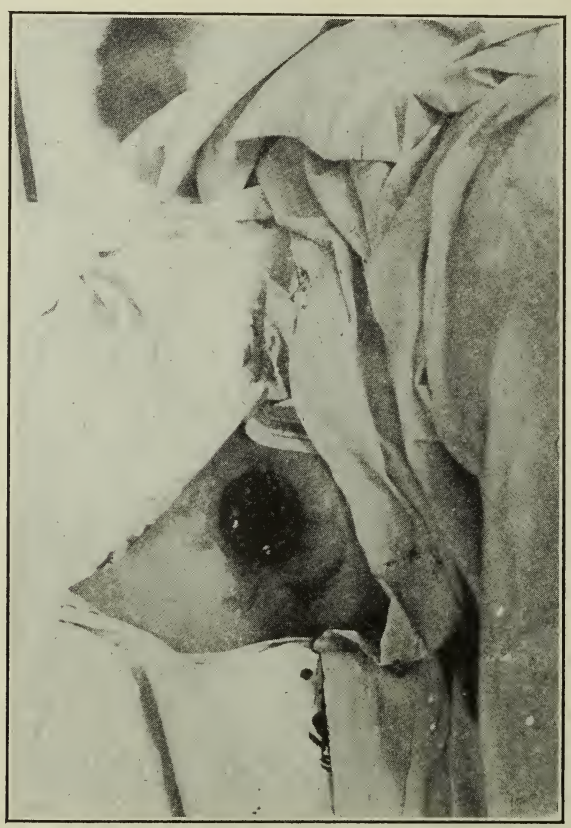
Past History: Negative, except for past 10 years he has suffered almost continuously from prolapsing internal hemorrhoids, which, when prolapsed, completely incapacitated him for work, and was compelled to lose several hours after each bowel movement in trying to replace the prolapsing mass. Bowels only allowed to move about twice a week on account of the bleeding and pain from his hemorrhoids.

Present Trouble: Patient presented himself at the University Hospital, very much prostrated and weakened from a prolonged attack of prolapsed bleeding hemorrhoids, which he had been unable to keep up for some days.

February 11, 1914: Patient taken to the operating-room at 12 o'clock, anesthetised with ether, and prepared for hemorrhoidectomy. Upon examination under anesthetic, the entire hemorrhoidal area was one large thrombotic mass, prolapsing for about two or three inches; the vessels were so thrombosed that they felt like thick fibrous bands radiating through the mass, and some evidences of beginning gangrenous degeneration was present and also suggestive of possible malignancy. After the photograph shown on page 138 was taken, it was decided to amputate the mass, and the above-mentioned procedure was repeated in this case as in the others here reported. Patient was discharged from the hospital on February 27, 1914, and directed to report at the office for a few dilatations with Wales bougies to prevent any possible tendency to primary contraction or stricture.

March 12, 1914: One month from date of operation patient was dicharged as cured, and has a perfect sphincter, no pain, bowels moving every day, and thinks that he has gained a few pounds in weight.

Case No. 5.—April 24, 1914: Called to the University Hospital to do a hemorrhoidectomy on a colored man who had presented himself to the dispensary the day before for bleeding from the rectum. Patient had had a very severe hemorrhage during the early morning, and said he had frequently lost a pint of blood at such periods. Dr. Edwards began to prepare patient, and while cleaning him up was surprised to find it possible to insert his entire fist into the rectal ampulla without stretching the sphincter. Having decided to remove a portion of the redundent mucous membrane, I had just started to dissect the muco-cutaneous



border, when the patient coughed, and there was prolapsed a mass of bloody oedematous bowel larger than one's head. We decided upon immediate amputation, and after the mass was removed were greeted with the knowledge that we were in the peritoneal cavity, and that the protruding stump of free gut was a portion of the colon above the sigmoid, as it was covered with appendices epiploicæ, which were literally hanging out. Peritoneal cavity was closed by catgut sutures around this portion of the colon, epiploical appendices were ligated and removed from this cuff of

bowel, which was then sutured to the skin. Patient so far has had an uneventful recovery, and the drains were removed from the peritoneal cavity on April 27; no pain, no temperature. Licorice powder was administered on the fourth day, and bowels moved twice April 30, which relieves the fear of obstruction. Upon investigating this case after operation I find that we had an intussusception of rectum and sigmoid, which had prolapsed, and that we have amputated not less than 14 or 15 inches of bowel. I base this calculation on the fact that the mass prolapsed was at least seven inches and invaginated.

Preparation of the Patient: The preparation should be similar in every respect to that used in preparing for perineal extirpation of rectum in cancer. If possible the patient should be in the hospital a few days before and the bowels thoroughly cleansed by purgation and daily rectal irrigations followed by injection into the rectal ampulla of a 25 per cent. solution of hydrogen peroxide. The diet should be restricted and of such character as will leave the least possible amount of debris.

On the morning of the operation a high enema should be given, and as soon as effectual it is well to inject into the rectal cavity 3 or 4 ounces of a 50 per cent. solution of hydrogen peroxide, which, if not expelled with the gas that follows its administration, should be washed out on the table at time of preparation for operation. After making primary incision and freeing lower end of bowel, I generally insert a small plug of gauze above field of operation, which materially assists in preventing leakage over field while at work, and the possibility of infection may be further reduced by touching the cut surface with pure carbolic acid, followed by pure alcohol before puncturing the mucosa with the needle in applying sutures to bring skin and mucous membrance in apposition.

The gauze plug is then removed and area should be free of all bleeding. The dressings consist of a few pads of gauze held in position by a well-fitting T bandage, and if it is desired to introduce a drain or plug, I personally prefer a Lynch tube, which serves several very good offices.

It is my preference, in as much as it keeps the sphincter dilated equally on all sides, the enlarged head exerts pressure at the desired point to prevent oozing, makes the patient more comfortable, in that they can expel gas, and lastly it gives perfect assurance against the possibility of hemorrhage being in any way concealed.

I do not think that there is any class of surgical cases who have a more constant fear of pain than the rectal patient, and I have yet to see one where, after proper administration of purgatives, followed by injection of 6 to 8 ounces of warm sweet oil at time of bowel movement, there has been any pain, and the patients are

always agreeably surprised and more than pleased. After bowels have moved once we endeavor to have a daily evacuation, and direct that the lower rectum be washed out after each stool with warm boric acid solution. The only complication that may be referred to at this time is the retention of urine; and I think it well to wait just a "little longer" than reasonable time before catheterizing, as it has been my experience on several occasions that the patient has voluntarily voided just as we were getting ready to catheterize.

While the above preparation is the one desired, it was not followed in the cases here presented, as this operation was not our intention beforehand.

If the patient is discharged from the hospital at the end of ten days, he should be directed to visit his physician every other day for at least a week, as the mucous surfaces will not be entirely healed and any small ulceration present may be touched up with a solution of silver nitrate. I also deem it wise to insert the finger into the anus upon these visits, as it keeps the sphincter dilated a little longer, and you may in this way prevent future stricture formation.

304 Professional Building, Baltimore, Md.

PRACTICAL SANITATION. A Handbook for Health Officers and Practitioners of Medicine. By Fletcher Gardner, M.D., Captain Medical Corps, Indiana National Guard; First Lieutenant Medical Reserve Corps, United States Army; Health Commissioner of Monroe County, Indiana, and James Persons Simonds, B.A., M.D., Professor of Preventive Medicine and Bacteriology, Medical Department, University of Texas; lately Superintendent, Indiana State Laboratory of Hygiene. Illustrated. St. Louis: C. V. Mosby Company. 1914. Cloth, $4 net.

Medicine is ever more and more turning to prevention rather than cure. Everybody realizes that from an economic standpoint this means a great saving to the community. In sanitation, as elsewhere in medicine, rapid strides have been made during the past few years. These changes have practically amounted to a revolution in our ideas concerning the subject. It is with these modern ideas as well as disease-preventing appliances that the above-mentioned book deals. Here in succinct form can be obtained at first hand the latest thought in matters sanitary. The sections on quarantine, schools, extermination of rats, flies, mosquitoes, bedbugs and other disease-carrying vermin are especially instructive and valuable. The book should prove especially serviceable to hygienists and sanitarians, as here, so far as we are aware, for the first time is this subject fully and comprehensively considered under one cover.

THE PRESENT STATUS OF RADIOACTIVE THERAPY IN MEDICINE.

By Ernest Zueblin, M.D.,
Professor of Medicine in the University of Maryland, Baltimore, Md.

(*Continued from May Number.*)

Influence Upon the Cardiovascular System.

Radioactive substances, especially thorium (Th. Maass,[147] Plesch,[12] Tsiurdis,[81 241]), in small doses stimulate the heart muscle, lessen the residual blood and even cause bradycardia. In larger doses (21,800 M. U.) the heart contractions improve in quality and are less frequent. Radioactivity has therefore been successfully used in the form of natural emanation baths and in form of the gas emanation from Franzensbad in cases of myocarditis and heart neuroses (Kemen,[148] Glaessgen,[28] Neunadovics,[39] v. Noorden and Falta[189]). Also thorium X was therapeutically employed in cases of angina pectoris, cardiac dyspnea (Plesch,[12] Gudzent[60]).

The fall of blood pressure after emanation treatment was one of the earliest therapeutic observations made. Experiments (Loewy[121]) with inhaled emanation have confirmed these facts and demonstrated the extensive effect of emanation upon the vasomotor system and the blood pressure. The injection of radioactive substances seems to be more effectual. The pulse amplitude becomes increased, frequently due to the diminution of the diastolic pressure (Loewy,[121 232] Engelmann[128]). Clinically, it cannot be denied that during and after the application with weak, medium and strong doses of radioemanation a change or decrease can be, but is not always (v. Noorden[69]), observed (Benczur,[57] Armstrong,[50] Falta,[38] Glaessgen,[28] etc.). Thorium X given in the form of strong hypodermic injections causes a decided fall in blood pressure (Gudzent,[60 90 211] Plesch,[12] Benczur,[212] Tsiwidis[241]). At the same time, headache, vertigo and other symptoms of cerebral congestion diminish; in fact, all symptoms associated with high blood pressure. For an explanation of these effects it is well to remember certain anatomical findings met with in thorium poisoning, important changes in the entire chromophil system (v. Salle and v. Domarus[215 219]). The paralyzing action upon the suprarenal glands and the decomposition of adrenalin would explain the fact that individuals with marked symptoms of irritation of the vasomotor nerves (vagotonia) tolerate very badly any form of radioactive treatment. In the appreciation of these effects with radioactive solutions in cases of arteriosclerosis we have not

to forget that also other factors, dietetic and climatological, the absence from psychic influences may also contribute to the result.

In cases of chronic parenchymatous nephritis, in uremia, favorable results are recorded by radioactive treatment (Goin,[149] Fuerstenberg,[150] Armstrong,[50] Benczur[212]).

Other Effects Observed (for which no conclusive explanation can yet be given, as in rheumatism and arthritis of non-gouty origin).

A number of patients who frequented the emanatories did not suffer from gout, as previously suspected, but from subacute or chronic arthritis, frequently from arthrosis deformans (not an inflammatory process, but due to perverted internal secretion, which condition later is followed by trophic and degenerative changes in the joints). Later this condition becomes complicated by secondary inflammation, *i. e.*, arthritis (van Noorden[69]). This error of diagnosis is frequently met with, and the patients subjected to rigorous dietary, which weakens the patient and means a disadvantage to his condition. Gouty joints are infrequent, whilst other joint diseases are the more frequent, particularly arthrosis deformans. It seems that many, though not all, of these rheumatic patients were greatly benefited by the radioactive treatment, so that the pains were either greatly relieved or disappeared, the hydrops diminished and even motility was restored (His,[4] v. Noorden[69]). As a rule, the treatment is followed by an increased inflammatory reaction, which is considered a favorable sign (perhaps this action is a consequence of the leucocytosis, the local hyperemia, which follows the application of radioactivity). Radioactive treatment has been given in all forms—inhalation, drinking, injections of radioactive solutions (radiogen, thorium X). Small doses of emanation (4-8 M. U. per liter air) were not so good as stronger doses (25 M. U. per liter). The results are striking with doses from 200-500 M. U. Without special selection of the cases, in subchronic and chronic forms of arthritis, of non-gouty origin, gonococcic, also in rheumatism, the results were very encouraging, even in some forms of acute rheumatism, where the residues (pains and swellings) were still present (Hovorka and Kronfeld,[256] Neusser,[251] Gottlieb,[250] v. Noorden and Falta,[189] Strasser,[158] Armstrong,[50] Strassburger,[59] Jansen,[135] Bernheim,[110] Falta and Freund,[36 207] Loewenthal,[67 244] Nagelschmidt,[86] Fuerstenberg,[47] Davidsohn,[61] Marckwald,[139 151] Kemen,[22] Aschoff,[152] Gudzent,[3 34 60 90 211 218] Glaessgen,[28] Scholz,[27] Benczur,[57 212] Minkowski,[79] Plesch,[12] Burnham,[163] Lowe,[164] Goldberg,[166] Mannes and Wellmann,[167] Kable,[179] E. Fraenkel,[213] Georges,[216] Prich,[226] Bickel,[229] Laqueur,[258] Rowntree and Baetjer[263]). But every case should be tried individually. Either indifferent springs, hot salt baths, fango treatment or Turkish baths may still be the best way in a given instance. Personal experience and the personal therapeutic instinct of the physician may be a better guide than all the book learning.

Myalgias and Neuralgias.

With regard to this great category of human suffering, the objection can be made that the treatment by neurologists, hydrotherapists and masseurs has been too much concentrated in treating a symptom instead of the cause. Usually one finds it stated in the textbooks that these painful manifestations are the expression of a faulty metabolism, particularly due to intoxication of one sort or another. The causal treatment of these neuralgias and myalgias offers more hope for success. Therefore, instead of the different regimes, named after their authors, a careful study of the cause should be encouraged. These etiological factors prove that the neuralgias and myalgias which arise as a consequence of different infections—toxins, colds, etc.—should not be overlooked. The whole arsenal of antirheumatics is powerless against the different etiological factors; consequently, physical treatment should not be forgotten. Radiotherapy, as a new and bright sister in the ring of its older mates, the hydrobalneotherapy, means a valuable contribution to the therapeutic means already at hand. The radioactive baths and gaseous springs are in the foreground (Glaessgen,[28] Kemen,[22] Aschoff[44]), but also places with inhalation (His,[4 33] Gudzent[3 211]) and facilities for drinking radioactive water (Benczur,[57] Joachimsthal, Kreuznach, etc.) have to be considered. The treatment in these establishments is more satisfactory than that given at home, as it removes the patient from his accustomed surroundings, in which he is always sure to lapse into his old habits. Radioactive solutions by mouth and injections have been successfully employed in cases of muscular rheumatism (Benczur[57]), in sacral pains resulting from menopause in neuralgias: trigeminus, alcoholic neuritis (Hovorka and Konfeld,[256] Neusser,[251] Gottlieb,[250] Armstrong,[50] Benczur,[57] Fuerstenberg[47]). In sciatica some cases are improved (Benczur,[57] Fuerstenberg,[47] Christides, Salzman, Schweitzer,[205] Simonson,[225] Prich[227]), not all. Results were negative in lumbago, multiple sclerosis, occipital neuralgia. In tabes and tabetic crises injections of radioactive solutions have been favorably reported (Benczur,[57 212] Schücking,[52] Freund[213]). Sometimes small doses (1/100 gr.) of radium salts, in other cases larger doses (1/10 mgr.), are necessary for the calming effect. In neuralgia the direct application of radioactive compresses have been recommended (Lazarus[19]), or the application of small bags containing radioactive salts for several hours (Buxbaum[62]) yielding favorable results in neuralgia of the fifth nerve, of the intercostal nerve and in sciatica. In similar instances thorium X has been used subcutaneously and by stomach. Favorable results are reported in chronic articular rheumatism, polyarthritis, neuralgia, sciatica (v. Noorden and Falta[189]), in migraine, tabetic crises (Falta and Freund,[36] Strasser,[158] Benczur,[212] Gudzent,[34 60 90] Nagelschmidt,[86] Nenadovics,[39] Geoerges[216]). A definite conclusion as regards the therapeutic value of radioactivity cannot be reached from the observations so far made in their use in these diseases.

Insomnia, Neurasthenia, Hyperexcitability.

The favorable action upon such conditions was first observed in cases treated in the emanatories (Benczur,[57] v. Noorden,[69] Armstrong,[39] Fuerstenberg[47]). The effect of suggestion could be eliminated by the observation that larger doses of emanation were still more beneficial. Definite indications for such a treatment cannot yet be given. Also small quantities of thorium injected subcutaneously had a favorable effect upon insomnia; however, the patients were under other calming influences than those just mentioned.

Sexual Power.

At the beginning of radioactive treatment different investigators observed the stimulating action of radioactive treatment upon the germinative glands and upon the reflex apparatus, provided that these organs are still able to functionate (Falta, Freund,[36] etc.). In mild cases of diabetes, similar effects have been reported from van Noorden's clinic. In such instances it is essential that the patients are absolutely free from sugar before the treatment is started, as radioactive treatment seems to check the healing of the diabetic patient. Provided that the antidiabetic diet is still strictly observed, radioactive water is given, containing 30,000-60,000 M. U., or in the form of inhalation (50-80 M. U. per liter air), or eventually as combination of inhalation and emanation baths. Thorium X also exerts a stimulating action upon the same organs. In treatment the greatest precaution is necessary, as an overdose would easily become harmful. In women the treatment by emanation caused a return of menstruation after menopause had already set in. Hemorrhage became very profuse in cases where previously they had been very weak. Such effects can occur even with very small doses, and therefore the greatest care has to be observed in women inclined to pronounced menorrhagia. Thorium X is considered a powerful emmenagogue.

Effect Upon the Gastrointestinal Tract.

Radioactive treatment may favorably influence neuroses of the stomach and of the intestines; constipation may be relieved as well (Benczur,[57] Armstrong[50]).

Contraindications for Radioactive Treatment.

Although a complete review of all the indications to radioactive treatment cannot be given at the present time, certain contraindications can be deduced from the great number of empiric and theoretical facts gathered. The list may still be changed.

Radioactive treatment is not advisable in (1) weak heart, especially with low blood pressure; (2) in neuroses of the vegetative nervous system, in cases of severe neurasthenia, vagotonia; (3) in wasting diseases, in Graves' disease (Falta), severe diabetes (v. Noorden[69]), in febrile conditions; (4) tendency to hemorrhages, as menorphagia, metrorrhagia, hemorrhagic diathesis, in

hemolytic processes, in pregnancy (Benczur,[57] Falta,[33] Jansen,[135] Nenadovics,[39] Eichholz[26]), ulcus ventriculi, in hemorrhagic nephritis (Nagelschmidt[259]); (5) far-advanced stages of blood diseases, affecting particularly the erythrocytic and leucoplastic system (not in early stages of the disease, which are particularly favorable for radioactive treatment); (6) otitis media (Benczur[57]), iritis (Benczur); (7) cachexia of any kind (very unfavorable influence being observed in carcinomatous cachexia), and (8) senile marasmus (not in cases of beginning symptoms of senility, where radioactive treatment acts favorably).

VALUE OF THE METHODS OF RADIOACTIVE TREATMENT.

Just as the indications for radioactive treatment cannot yet be definitely outlined, the same precaution is indicated for the different methods of treatment. A classification according to the intensity of effect obtained can be attempted, however.

(1) Thorium X by injections is the finest remedy, allowing a varied gradation from smallest doses up to largest doses, which even may endanger life. The effects are so manifold, partly very violent. The quantitative relationship between dose and effect has yet not been sufficiently studied, so that this treatment cannot yet be recommended for general use. In drinking thorium X water the same precaution is necessary, but it seems likely that these substances administered in such a way probably are not inferior to the injections (Bickel[70]). An undesirable effect, the irritation of the gastrointestinal tract (Gudzent,[78] Nagelschmidt,[55] Czerny and Caan,[153] etc.), has to be remembered, which action, by careful dosage, can be avoided. So far as can be said, the thorium X treatment has a great future before all other methods, provided we learn more about its actions (two fatal cases, Orth,[89] Gudzent[90]). With proper care this substance may even be used for the treatment at home. Particularly in cases where considerable amounts of radioactive energy has to be applied in a concentrated form it will be indicated. For instance, in cases of leukemia (with the exclusion of pernicious anemia); also in cases of gout, in chronic torpid arthritis and arthritis deformans, neuralgia, myalgia; perhaps, also, it may become advisable in sexual impotency.

Theoretically, injections of radium do not differ greatly from thorium. However, a medium dose of thorium will exert a good action, and will not be so expensive as radium. The injections of radium salts used at the present time are generally too weak. Large doses of radium are most successful in severe cases of anemia. The stimulating dose of radium, acting upon the bone marrow, remains far below the hemolytic dose. The influence upon the leucocytic system is not so evident nor so dangerous as with thorium X. In the latter substance the margin between the therapeutic and the toxic dose is very small. Radium emanation in serious anemias, even very large doses, has not the same effect as when radium salts are injected. Injections with radium salts

are indicated in severe cases of chronic articular rheumatism still complicated with fresh exacerbations. However, this is a very expensive treatment.

Combination treatment of strong radioactive springs with emanatorium and drink cure (Plesch, Fuerstenberg, His, Glaessgen, etc.) seems to be the popular treatment of the practitioner anxious to refer his patient to the safer and more certain radioactive treatment. For very susceptible and run-down patients it may be advisable to prescribe first the emanation treatment by inhalation and by drinking the water. Then, when the reaction has passed, the baths can be given (Laqueur and Loewenthal). Even small doses of emanation may already give good therapeutic results (Benedict[196]).

The most *important indications* are (a) genuine gout, provided that the patient during the whole treatment observes strict diet; (b) arthritis of non-gouty origin, provided these conditions have been unsuccessfully treated by rest, antirheumatic remedies, and where the patient has become discouraged; (c) myalgia and neuralgia, not caused by metabolic disturbances, radioactive treatment is indicated where physical and chemical treatment can be recommended; (d) impotency, not due to metabolic causes, radioactive treatment, perhaps a small dose of thorium X, may be preferred to the emanation baths; (e) beginning symptoms of old age, without morbid manifestations. Gastein, long before our knowledge of radium, was found a rejuvenating spring, and also patients returning from Joachimsthal praise the stimulating qualities of the treatment received there. Injections of small doses of radium and thorium daily (100-2000 M. U.), continued for several weeks, seem to have a stimulating influence upon elderly people. A definite opinion upon this subject cannot as yet be given at present, as the many factors which may have a share in this effect must be considered; (f) light forms of neurasthenia, nervous insomnia, nervous pruritus.

Strong emanatories come only at this place, even if they contain at least 25 M. U. in the liter, as well as these waters, which admit a further increase of their radioactive strength. Such institutions, however, are still very expensive; they are substituted by the movable apparatus, which still need greater perfection until great results can be expected. The emanation bed of Neulengfeld can be quoted in this instance. The emanatorias of medium strength (12-25 M. U.) and the drinking cures with water, containing high amounts of emanation (30,000-60,000 M. U. per die). If only local reactions are desired, the highly standardized radioactive cushions and compresses may be mentioned, and least of all the weak emanatorias, with 8-12 M. U. This form of treatment has been recommended and used most frequently in cities, water resorts and sanitariums long before the physiological and pharmacodynamic properties of these weak gaseous mixtures has been sufficiently studied. Not only a great

amount of money has been wasted by the lack of discrimination in choosing this method and too weak doses for having any therapeutic effect whatsoever. Doubtless radioactive treatment has its value, but in the future it will be necessary to watch the further development of this treatment without too much enthusiasm, but without a nihilism which opposes any new method of treatment (Lazarus,[190] [191] Kisch,[192] [210] Weisz,[193] Hirsch,[194] Fuerstenberg,[194] etc.). After more careful studies (physiological, pharmacological and clinical) we must gradually reach a better understanding of the problem involved. Until this period has been reached radioactive treatment cannot yet be recommended for general use. The more is this true for the thorium treatment, which embodies great curative, but also dangerous, properties, which have to be fully considered.

[In the following list only the most important papers have been consulted, and so far as obtainable through the kindness of the librarian of the Surg. Medic. Library at Washington, D. C., which courtesies I wish to acknowledge especially. The literature on radium and radiotherapy during the last 10 years exceeds 700 articles.]

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Book Reviews.

A Text-Book of the Practice of Medicine. By James M. Anders, M.D., Ph.D., LL.D., Professor of Medicine and Clinical Medicine at the Medico-Chirurgical College; Physician to the Medico-Chirurgical Hospital; Consulting Physician to the Jewish Hospital and to the Widener Home for Crippled Children; formerly Physician to the Philadelphia and to the Protestant Episcopal Hospitals, Philadelphia; Officier de l'Instruction Publique. Illustrated. Eleventh Edition,, Thoroughly Revised. Philadelphia and London: W. B. Saunders Company. Baltimore: The Medical Standard Book Company, 1913. Cloth, $5.50 net. Half Morocco, $7 net.

Anders' Practice of Medicine is so well and so favorably known that it seems useless to expatiate upon its virtues. Like Osler's Practice, it is a classic, and with the present revision should retain its erstwhile popularity with practitioner and student alike. It is indeed unnecessary to recall the many virtues of the previous editions of this book, for they are too well known by our readers. However, since the appearance of the last edition there have been quite a few changes in medical thought, and to render the book of the greatest value to the greatest number it became necessary to recast a considerable portion of the book. Among the many additions may be mentioned McPhedran's sign of peritonitis in typhoid fever, Burke's reflex sign in typhoid fever, hot air inhalations in diphtheria, Weil's test in syphilis, Pastia's sign of scarlet fever, Karell milk-cure in vavular heart disease, Boas' method of testing motor function of stomach, Falk and Salomon's reaction in gastric cancer, chloride retention theory of renal dropsy, Towns-Lambert method of treating morphinism, etc. Besides these additions the author has added sections on diseases of the parathyroid glands, streptococcus tonsillitis, anti-typhoid vaccination, pellagra, Lane's kink of the ileum, etc. Therefore we state without hesitation that the present edition of Anders' Practice will more fully than ever meet the most critical demands of the profession, as in both diagnosis and treatment the author is conservative in tone and amply explicit.

Diagnosis of the Malignant Tumors of the Abdominal Viscera. By Prof. Rudolph Schmidt, Professor of Medicine in the University of Innsbruck. Authorized English version. By Joseph Burke, Sc.D., M.D., Attending Surgeon, Buffalo Hospital of the Sisters of Charity; Consulting Surgeon, Emergency Hospital, Buffalo, N. Y. New York: Rebman Company. Cloth, $4 net. 1913.

Malignant disease is so on the increase that any information which will help us in recognizing the distempter before it has advanced beyond help serves a very useful purpose. This is espe-

cially true of abdominal cancer, as it is deep-seated, difficult of access for diagnostic purposes, and as a consequence apt to be discovered only after far developed. The family physician will especially derive much benefit from a close study of this book, as it is he who is first called in to see these cases. Therefore, it is up to him to be fully prepared to make the proper diagnosis and to refer the patient to the surgeon before it is too late to institute radical measures. The book at every opportunity impresses upon the reader the importance of early recognition of abdominal malignancy, and thoroughly and scientifically outlines the plan by which the author has derived most success in diagnosticating abdominal disorders.

The volume consists of two parts, the first of which is devoted to a general discussion, such as physical examination of the abdomen, chemical demonstration of blood in the feces, the diagnostic significance of vegetable and bacterial organisms of the gastro-intestinal tract, Ehrlich's diazo reaction, prophylaxis of malignant tumors, etc., and the second, which takes up in detail cancer of the stomach, early symptoms, associated symptoms in other organs, feces and stomach contents, types of disease, course and duration, differential diagnosis, carcinoma of the large intestine, of the liver, gall-bladder, pancreas, kidney. Included are also a number of case histories illustrating the text.

Nobody is in a position through abundance of material to better write upon the above subject. In fact, Dr. Schmidt's opportunities for study along these lines have indeed been rare, as a result of which he has made a book of the greatest merit.

Materia Medica, Pharmacology, Therapeutics, Prescription Writing. For Students and Practitioners. By Walter A. Bastedo, Ph.G., M.D., Associate in Pharmacology and Therapeutics at Columbia University; Assistant Attending Physican to St. Luke's Hospital, New York City; Consulting Gastro-Enterologist to the Smith's Infirmary and to the Red Cross Hospital; Consulting Physician to St. Vincent's Hospital, Staten Island; Fifth Vice-Presdent of the National Convention for the Revision of the United States Pharmacopeia; formerly Curator of the New York Botanical Garden. Illustrated. Philadelphia and London: W. B. Saunders Company. Baltimore: The Medical Standard Book Company. Cloth, $1.00. 1913.

One would say hastily that enough and sufficiently good materia medicas are already on the market. Rashly and without thoroughly inspecting the present presentation the same opinion would prevail, but with a thorough study of the manner and method in

which the author presents his subject soon awakens one to a realization that he is dealing with a book somewhat out of the ordinary. Today too little attention is being given by the physician to the possibilities of the employment of drugs in the combating of disease. Such a treatise as the one before us should go a long way in dissipating this indifference of the profession, as the author by experimentation upon animals and observation upon the sick attempts to demonstrate the actions of the various agents described in the book. Everywhere one is impressed with the great reliance he places upon laboratory investigations in the study of drugs. Here as elsewhere in medicine research is coming into its own, and drugs which were formerly supposed to be of great merit have by these measures been found wanting, and vice versa. The book is admirably adapted to student purposes or the needs of the general practitioner. It gives us great pleasure to put our stamp of approbation upon the book, and we heartily commend it to the consideration of the profession.

THE PATHOGENESIS OF SALVARSAN FATALITIES. By Sanitaets-Rat Dr. Wilhelm Wechselmann, Directing Physician of the Dermatological Department, Rudolph Virchow Hospital in Berlin. Authorized Translation by Clarence Martin, M.D., First Lieutenant M. R. C., U. S. A.; late Clinical Assistant, St. Peter's Hospital for Stone and Other Urinary Diseases, London; Member Association Military Surgeons, Berlin Urological Society, etc. St. Louis, Mo.: The Fleming-Smith Company. 1914. Cloth, $1.50 net.

As Dr. Wechselmann has the largest experience of any man in the world with salvarsan medication, his conclusions are worthy of the most serious consideration. Here one will also find his investigations concerning the underlying factors present in fatal cases. Dr. Wechselmann plainly states that the intravenous injection of salvarsan is not free from marked dangers. He further says in fatal cases one is not justified in concluding that death was due to the salvarsan or even its cumulative action, but to something inherent in the patient, for millions of doses have been injected without any signs of salvarsan poisoning. Though some authorities believe that death is an expression of arsenical poisoning, Wechselmann cannot after a full investigation bring himself to that belief. He, on the other hand, thinks it due to some interference with kidney function, something akin to uremia. As an earnest of this belief the author cites numerous experiments performed on healthy rabbits. He is therefore firmly convinced that accidents are incident to interference with renal function. He further states: From the literature of reported cases of deaths one can see that such fatalities form a variegated group without

showing a distinct type. In only the smallest number of these can death be attributed directly to salvarsan. The marked differences in the clinical pictures of fatal cases, among which encephalitis hemorrhagica is a frequent type, show that salvarsan, in so far as the greater number of cases are concerned, is but an indeterminate factor and not a distinct cause of death. Thus no uniform explanation fitting all cases can be given. A glance at the report of fatalities is sufficient to show how recklessly salvarsan was employed at first, and it is certain that many fatalities could have been avoided. He then gives the precautions necessary to its use, namely:

1. The most exact technic.
2. A dose of the drug carefully adapted to the individual case.
3. Careful observation of the urinary secretion when employing salvarsan; resorting to the most exact chemical and microscopical examination of the urine. This holds good, particularly when the combined treatment is employed.
4. The conjoint use of salvarsan with heavy mercurial treatment is dangerous. If one will use the combined treatment, then give mercury very carefully many days after the last salvarsan injection, but never reverse this rule.
5. Take into careful consideration every general reaction or rise of temperature, following the use of salvarsan, and make a full investigation of the causes of such effect.

The Diseases of Children. By Henry Enos Tuley, M.D., late Professor of Obstetrics, University of Louisville, Medical Department; Visiting Physician, Masonic Widows and Orphans' Home, Louisville, Ky.; Secretary of the Mississippi Valley Medical Association; Ex-Secretary and Ex-Chairman of the Section on Diseases of Children, American Medical Association; Ex-President American Association Medical Milk Commission, etc. With One Hundred and Six Engravings and Three Colored Plates. Second Revised Edition. St. Louis: C. V. Mosby Company. 1913. Cloth, $5.50 net.

The second edition of Tuley's Diseases of Children will be found by the general practitioner to cater to his taste. It is well written and covers the field thoroughly but not overly so. Whilst it has many good features, that which will appeal to the reader most is the fullness with which it elucidates treatment. Wherever one opens the pages one will be struck with the practical tone of the contents. The illustrations are numerous, well selected and apparently chosen for their usefulness in elucidating the text. The frontispiece is a colored plate showing Koplik's spots. Both students and practitioners will find it an invaluable aid in their work.

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BALTIMORE, JUNE, 1914

ORAL SEPSIS AS A GATEWAY OF CRYPTOGENIC INFECTION.

ONLY recently, and as yet not too generally, oral sepsis of one character or another has come to be recognized by the profession as a possible nidus of infection of an obscure nature. When one stops to think of the many general ravages set up by diseased conditions of the mouth, one stops to wonder why the profession has been so tardy in bestowing a proper amount of attention to disorders of the oral cavity. In medical schools practically no instruction is given to diseases of the mouth, therefore the student graduates without a proper amount of respect for these disorders, looking upon them as of minor importance and of no great amount of consequence. This apathy should be corrected and no doubt will when the profession is brought to realize the number of lesions of obscure nature which may take their origin from septic conditions seated in the mouth. An article by William H. Haskin in the May number of the New York *Medical Journal* should go a long way in educating the profession concerning the many cryptogenic lesions which are due to infection originating in the alveolar process. He states that the dental profession is now thoroughly alive to this evil and making every effort to educate the public, medical and dental professions as to the possible ill effects upon the body by neglecting infections of the jaw. However, the blame for the present state of oral sepsis must be largely placed upon the medical profession because of its inexcusable ignorance as to existing conditions through lack of definite knowledge of the teeth. This is not surprising when we realize

that doctors themselves are most negligent of their mouths. Purulent diseases of the jaws always attack first the membrane lining the teeth sockets, and must start either at the gum margin or at the apex of the root. When it occurs at the apex we get apical abscess, commonly called gum-boil. Everyone knows the great distress caused by abscess here and of the relief incident to its lancing. But how many realize the pathological destruction that occurs? Every apical abscess causes destruction of the alveolus around the apex and almost invariably a perforation of either the lingual or labial plate of bone. This is nothing more or less than an osteomyelitis, and as such is attended with more or less general toxemia from the bacterial poisons generated. After the acute condition subsides the patient believes he is cured. Such usually is the case, but not always, as sometimes very serious conditions follow as the result of toxic absorption from a chronic abscess left as a relic. There is no doubt that many of these acute conditions, when properly handled, heal and leave no sepsis of the jaw. Unfortunately, healing does not always occur, notwithstanding the subsidence of pain, and the patient considers himself cured. Careful examination of the mucous membrane over the apex will often reveal minute fistulous openings through either lingual or labial plate which lead to carious cavities. According to the writer of the above article, fistulous apical abscesses are very common, and will often account for offensive breath, if nothing worse, to say the least a most mortifying affliction. Infection arising in the margin of the gum, constituting pyorrhea alveolaris, or Riggs' disease, is also a most frequent precursor of constitutional disorders of cryptogenic origin. Consequently, in maladies of obscure nature, especially those which are dependent upon infective processes, thoroughly examine the gums. Infection here can always be found without difficulty if looked for. It begins with a reddening of the margin of the gum, which soon becomes tender and bleeds easily. If not arrested this inflammation spreads up along the roots of the teeth and forms pus sockets, and finally attacks the alveolus itself. If one stops to think that such systemic diseases as rheumatoid arthritis, endocarditis, gastric ulcer, have been definitely proven sequelae of infected jaws, it is time that we take this subject seriously and bestow upon the teeth and jaws enough time to enable us to recognize alveolitis as readily as bone infection elsewhere.

Medical Items.

The sixteenth annual meeting of the American Proctologic Society will be held at Atlantic City, N. J., June 22 and 23, 1914.

Dr. A. Trego Shertzer, who has been seriously ill at his home for the past two weeks, is improving.

One case of smallpox was discovered recently in Centreville.

By invitation of the trustees of Johns Hopkins Hospital, the April meeting of the Baltimore County Medical Association was held at the hospital at 2 o'clock Wednesday afternoon. There were demonstrations of cases by Prof. William S. Thayer and clinics by Dr. L. H. Watkins.

Passed Assistant Surgeon D. C. Walton, Lieutenant, U. S. N., Johns Hopkins Medical School, class of 1909, has been transferred from the Naval Hospital, New York, to the Naval Academy at Annapolis, Md.

Passed Assistant Surgeon Ralph Walker McDowell has been detached from the Naval Academy at Annapolis, Md., to await orders at Annapolis.

On April 13 a room in St. Luke's Hospital was dedicated with appropriate ceremonies to Dr. Philip B. Towler.

Dr. Theodore C. Janeway, now Bard professor of medicine in Columbia University and director of the medical department of the Presbyterian Hospital of New York, has been appointed professor of medicine in Johns Hopkins University, succeeding Dr. Lewellys F. Barker, who, however, will retain his connection with the university in an important capacity. The appointment will take effect at the close of the present academic year. The school is most fortunate in securing the services of so distinguished a clinical teacher, investigator and physician.

Dr. J. H. Mason Knox has been appointed a member of the Board of State Aid and Charities.

Dr. Hugh Hampton Young has been reappointed a member of the Lunacy Commission.

Dr. Albert T. Chambers has been reappointed by the Mayor a member of the School Board of Baltimore city.

Dr. William H. Scruggs, Jr., of the staff of the State Sanatorium, Sabillasville, has declined the position of second assistant physician to the Massachusetts State Hospital for Tuberculosis at Lakeville, Mass.

Dr. Hampson H. Biedler of 119 W. Saratoga street has been seriously ill with ptomaine poisoning.

Dr. Richard H. Follis, Johns Hopkins Medical School, class of 1899, and Mrs. Follis, of 3 E. Read street, have leased for the summer a cottage in the Green Spring Valley, which they will occupy early in June.

The annual commencement exercises of the Nurses' Training School of the Church Home and Infirmary were held in the rotunda of the infirmary May 14. There were 15 graduates. The diplomas were delivered by Bishop John Gardner Murray. The principal address was made by Dr. Guy L. Hunner. The graduates were Misses Margaret Harbough, Eva Hartman, Sara Sutherland, Florence Stem, Elizabeth Minnick, Beatrice Blair, Ellen Schaeffer, Nettie Palagano, Virginia Wedderburn and Mary Davenport, all of Baltimore; Sara Claggett, Annapolis; Grace Robosson, Cumberland; Nina Hooper of Hoopers Island, Md.; Millie Shull and Anna Miller of Washington.

The annual banquet given to the graduating class by the Alumnae Association was held at the Hotel Rennert the following evening, May 15.

Dr. Winford H. Smith, superintendent of Johns Hopkins Hospital, who for the past two months has been supervising the planning of the million-dollar hospital for the University of California, has returned to Baltimore.

Dr. Smith's selection as consultor for the hospital was a distinct tribute to his ability as an organizer, as it was a tacit asknowledgment that he was one of the country's leading hospital heads. His executive capacity is shown in the excellent management of Johns Hopkins Hospital.

He awarded the diplomas to the graduates of the Nurses' Training School, May 20.

Dr. Hiram Woods has been appointed a member of the Board of State Aid and Charities.

Dr. S. K. Owens of Montgomery, W. Va., who has been taking a post-graduate course in diseases of the eye, ear, throat and nose at the Philadelphia Polyclinic and College for Graduates in Medicine, has been visiting his mother, Mrs. John S. Owens, 11 East Lafayette avenue, Baltimore. Dr. Owens is a graduate

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of the College of Physicians and Surgeons, Baltimore.

Dr. Henry Barton Jacobs was elected secretary of the National Association for the Study and Prevention of Tuberculosis at the annual meeting of the association, held in Washington, D. C.

Bids have been asked of several large contracting firms for the construction of the new maternity building of the Hebrew Hospital. It is expected that the work will be started right away, and that the building will be ready for use within six months.

The cost of the building complete has been donated by Abraham Mendels, and is estimated to approach $50,000. Between 20 and 25 beds will be provided for the mothers, and everyone will be in a separate room. Every phase of modern obstetrical work will be provided for with the latest efficient devices and methods, and there will be in addition an up-to-date X-ray laboratory.

The two weeks' campaign to raise $320,000 for Mercy Hospital closed with contributions aggregating $120,948.96. Pledges for assistance within the year have been given members of the committee, and their plans will no doubt be fully carried out within a year or two.

Dr. and Mrs. Alexander D. McConachie will spend the summer traveling in Europe. They will sail from New York July 8 on the steamship Mauretania.

BIRTHS.

To Albert M. D. McCormick, M.D., University of Maryland Medical School, class of 1888, Medical Inspector, Commander, U. S. N., and Mrs. McCormick, of 8 Sampson Row, U. S. Naval Academy, Annapolis, Md., March 25, 1914, a daughter.

Recently to Frederick H. Vinup, M.D., University of Maryland Medical School, class of 1909, and Mrs. Vinup, of 1221 Hollins street, Baltimore, a daughter.

To J. Albert Chatard, M.D., Johns Hopkins Medical School, class of 1903, and Mrs. Chatard, of 40 W. Biddle street, April 18, 1914, a son—Ferdinand E. Chatard.

MARRIAGES.

S. Ernest Enfield, M.D., Physicians and Surgeons, 1913, of Baltimore, Md., to Miss Lelia May Scarborough of Havre de Grace, Md., at Havre de Grace, May 9, 1914. Dr. Enfield is connected with the Mercy Hospital.

Dewitt Bellinger Casler, M.D., Johns Hopkins Medical School, 1904, formerly of Little Falls, N. Y., now of Baltimore, to Miss Carolyn Brooks Johnston of Baltimore, at Baltimore, April 30, 1914. After a wedding trip spent in Bermuda, Dr. and Mrs. Casler will reside in Baltimore, where the groom is practicing his profession.

Humphrey W. Butler, M.D., University of Maryland Medical School, 1913, of Brazil, South America, to Miss Mildred Bartownia Baker of Fredericksburg, Va., at Fredericksburg, April 23, 1914.

Clifford T. Sappington, M.D., University of Maryland Medical School, 1903, to Miss Kate Eloise Kelly, both of Frederick, Md., at Frederick, April 13, 1914.

DEATHS.

Richard Alexander Urquhart, M.D., instructor in pediatrics at the Johns Hopkins Medical School, died suddenly of heart failure at his home, 48 W. Biddle street, April 22, 1914, aged 42 years.

Dr. Urquhart was prominent in medical circles in this city. He was assistant pediatrician at the Johns Hopkins Dispensary, attendant physician to the Union Protestant Infirmary, the Church Home and Infirmary, the Baltimore Orphan Asylum and the James Lawrence Kernan Hospital and Industrial School for Crippled Children. He was one of the medical inspectors of the public schools.

Richard Pinkney Blackistone, M.D., University of Maryland Medical School, 1849, of River Springs, Md., died at his home May 12, 1914, aged 91 years.

Morris R. Bowie, M.D., University of Maryland Medical School, 1908, of Somerset, Col., died at his home in October, 1913, aged 27 years.

Charles L. Randell, M.D., College of Physicians and Surgeons, 1889, of Portland, Md., a member of the South Atlantic Medical Association, died at his home in Marion, S. C., recently from pneumonia, aged 53 years.

John Thomas Shepherd, Acting Assistant Surgeon, U. S. P. H. and M. H. Service, University of Maryland Medical School, 1874, died at his home in Chattanooga, Tenn., March 22, 1914, from heart disease, aged 64 years.

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PERFORATING DUODENAL ULCER, WITH REFERENCE TO PAIN IN LEFT SHOULDER AS A SYMPTOM.*

By A. A. Matthews, M.D.

Recently there has been much written in the magazines regarding this condition; formerly it was the gastric ulcer, but of late the limelight has been directed to the duodenum.

There is one thing which has impressed me very forcibly in four of the cases which I am reporting, and of which I have not seen reference in any literature at my command, and it seems to me worthy calling attention to, and I would be glad to hear from you gentlemen who have dealt with such cases, especially in reference to this symptom. That is a referred pain to the left shoulder, not in the upper left side or the back or upper chest, which I admit is often seen in ulcers on posterior surface of stomach and other conditions, but the shoulder proper. I do not know why such should be the case and why it has been a prominent symptom in my small collection of cases.

In cases 3, 4, 5 and 6, as you will note by the histories, this was a prominent symptom, especially so in Case 4, whose chief pain seemed to be centered there, and the first thing he complained to me about when I saw him was the pain in his left shoulder.

I am inclined to think this symptom is present very often, but we have had our attention centered on the belly, and simply accept it as a referred pain to the chest, which is common in upper belly conditions, and have not suspected or inquired in regards to it.

It would hardly be a coincidence to find this symptom in four straight running cases. Such has been the case in my small series.

*Read before the Spokane County Medical Society, December 13, 1913.

I will run over briefly the subject of perforating duodenal ulcer before going into the histories.

These perforations still often escape recognition and are mistaken for other lesions, and consequently result in the delay of proper treatment and often terminate fatally, notwithstanding the advances and progress that has been made in abdominal diagnosis of today.

Practically one can always elicit a history of previous gastric disturbance varying in intensity from severe symptoms to mild dyspeptic disorders. There are few instances where there have been no premonitory symptoms at all, and the perforation to occur without the slightest warning, but these cases must be regarded as extremely unusual.

The objective symptoms are most important, the character of the respiratory movement, the preponderance of thoracic over abdominal breathing.

The muscular rigidity is always constant and a most valuable objective sign. The belly at first is not distended, but retracted, the muscles ever tense, never relaxing for one moment, which is not so marked in other pathological lesions in the belly, excluding possibly gastric perforation.

When these perforations occur the pain is of the most severe, lacerating character and borne with great difficulty by the individual. If standing, reaching up or moving about the individual will often drop as though shot in agonizing pain, which is aggravated by motion, and even by breathing. So severe has it been that Moynihan reported one case of death due to the violent onset of the pain. The patient is usually prostrated, pale and faint, his eyes set with an expression of terror. The pain is usually epigastric at first, but may vary later according to the location of the exudate and spread of the peritonitis.

Vomiting is possibly the next most common symptom, being present in about two-thirds of all cases. This symptom becomes more prominent as the peritonitis advances. I do not regard this symptom of any special diagnostic value, for practically in all acute abdominal conditions we have vomiting, especially if the stomach contains anything. Blood in the vomit in any quantity in these cases is a rarity.

Shock is a most over-rated symptom, and if there is an immediate shock it is not of much duration and should not be a contra-indication to operation. Van Hook and Kanaval, in Keen's Surgery, say it is always well to let the initial shock pass by and allow the patient to gain some strength before opening the abdomen. They further state that in a short while this usually passes away.

I think this a mistake, for as soon as the diagnosis is made the operation should be performed, and it cannot be done too soon, even though there is a question as to the exact diagnosis. If a perforation is suspected, the work should begin at once.

The disappearance of liver dullness by many is considered an unreliable symptom, and if present, is a late one; and, too, I think too much stress is placed upon dullness in the flanks, it being, in my opinion, rather uncertain, unless considerable time has elapsed for fluid to collect, and it does not help us a great deal in making a differential diagnosis. Dr. Elliot claims he can, by auscultation, elicit very small quantity of fluid located in these regions, and regards this symptom with considerable importance.

I will not go into detail as to differential diagnosis. The most common error is to confound the trouble with acute appendicitis, and this mistake was made in two of the cases I am reporting. There is no grave mistake in making this error, for if there is a question in the mind of the operator he most certainly should lean toward the appendix and make a McBurney incision; and then, if finding the appendix not involved, it serves as a very adequate drainage by passing a tube into the culdesac, for in all of these cases the writer considers it decidedly the safest procedure. And, too, if there is considerable infection, it is well to put in a drainage under the kidneys.

As to the treatment of these ulcers, there seems to be much controversy, some claiming to excise and then suture to be the proper procedure. But I believe most authors who have written on this subject are inclined to simply suture and fortify, if necessary, the area with a piece of omentum.

In the cases which I am reporting this was done and no attempt to excise the ulcer. I do not consider it practical unless located on the anterior surface, and even then unnecessary. When located posteriorly or far around from the front it would make it a very much more formidable operation and increase the danger to our patient.

There have been a number of cases reported when death followed some time after the operation where the suture alone was used, and in all these cases the result was as perfect as could be expected; and one case reported by Mennoch, nine weeks after the operation, at the autopsy no trace of the ulcer was found.

A much-mooted question among many operators is the advisability of doing a gastro-enterostomy at the time the perforation is sutured, and there are very good arguments for and against.

I believe each case should be an example within itself, as well as the ability of the operator to be considered.

Dr. Deaver is an ardent supporter of this procedure. With a man of his ability and experience, a procedure of this character would often be advisable, while in other hands, the same condition existing, it would be unwise. In none of the cases which I am reporting was this procedure advisable, except possibly one, and that being Case 2. In the future, in the early cases gotten a short while after perforation, I believe, there being no contra-indication, I would do a gastro-enterostomy. But these will be selective cases, not the general run.

Dr. Deaver further reports that of cultures taken from the peritoneal fluid of 20 cases, only 6 showed any growth, and he believes the irritation is a chemical one rather than a bacterial one at first. Of course, there are conditions where the pylorus is much constricted by infolding of an indurated ulcer, making a gastro-enterostomy essential in some few cases.

The question of drainage in these cases is a very important one. If the McBurney incision has been made, it will act admirably for a drainage tube to pass down through into the pelvis. The patient should be kept in the extreme Fowler position so that the subphrenic spaces will drain, it being more difficult to drain these areas than any other part of the peritoneal cavity on account of their being partially surrounded by bony framework. It has been advised to make counter openings through the lower posterior pleural space. I do not consider this a justifiable procedure at first, but, if necessary, may be resorted to later if the extreme Fowler position does not suffice. It was necessary for me to do so in Case 5. A supra-pubic stab wound with a split drainage tube in the pelvis will suffice, and is more satisfactory than any other form of drainage material.

The routine after treatment of these cases has been extreme Fowler position, pelvic drainage, preferably a split tube, which is gradually shortened about an inch a day, beginning about 36-48 hours after the operation, never removing the tube, but simply drawing up and cutting off each day, using a safety pin in tube to keep from losing same in wound. Continuous proctoclysis, usually the Murphy method or some modification.

I wish to state here that I prefer warm tap water to the saline, while up until about 18 months ago I always used the saline; but after reading and seeing some splendid results gotten in nephritic cases by the salt-free diet, and knowing that any amount above 2½ to 3 grams was an excess to an individual in 24 hours, made me think that by throwing in great quantities of normal salt solution, sometimes as much as 18 pints in 24 hours, it was a great tax on the kidneys, and makes one wonder sometimes if we have not hurried on suppression cases over the Great Divide, or possibly been in a mild way partially responsible for the cause. We can never drink salt water. Why should we be forced to do so without tasting? Absolutely nothing by mouth, the free use of the stomach tube every three to four hours if there is persistent vomiting or a tendency to gastric dilatation.

In these cases I never give water by mouth until the patient has gone at least 12 hours without vomiting. After a bowel movement give beef tea, broth or egg albumen in small quantities every two hours, and then gradually increase, then put them on slops.

The bowels should be only moved by enema, never giving medicine by mouth. For the following six months make them follow a rigid diet, eating nothing except that which has been put through a small sieve. This, I believe, will insure them a cure, even though

the gastro-enterostomy was not done at the time of the primary operation.

Another thing that cannot be too strongly emphasized, and that is to avoid the use of morphine in these cases until one is satisfied as to the diagnosis and what procedure is to be taken, for the influence of this drug in these, as all other acute abdominal catastrophes, puts false hope into our patients and their family, and at the same time is very deceiving to the physician, putting off the only procedure that can save life, and incidentally lessening their chance of recovery very materially every hour that they delay.

SUMMARY.

First—Diagnosis is made upon person's history, which is always most important, especially the gastric history.

Second—Onset of violent, uncontrollable pain, first epigastric, later referred to chest and general abdomen.

Third—Muscular rigidity of abdomen, retracted at first and boardlike, later distended and tense, respiration limited to upper chest.

Fourth—Treatment only surgical, suturing the perforation and drainage, gastro-enterostomy in select cases.

Fifth—Pelvic drainage, Fowler position extreme, and continuous proctoclysis.

Case 1—September 18, 1908.—C. H., age 26, occupation a miner. Family and past history negative, except had noticed a little gastric disturbance in his right side high up when he ate in excess, but this was never so severe as to make him restrict his diet in any manner. The discomfort was so slight that he considered it of no moment.

While coming from the mine he was taken with a severe abdominal pain in his upper abdomen and vomited.

The examination revealed temperature 99½, pulse 100; the abdomen was retracted boardlike and extremely sensitive, most of his tenderness being in his right side, extending from the costal border well down toward the pelvis, which made it suspicious of some appendicular trouble. He was operated upon a few hours after the perforation had happened.

An incision was made over the appendix region. The belly was found full of yellow fluid and the appendix not to be the cause of the trouble, although the same was removed. An opening was made through the right rectus muscle high up. A small perforation was found in the pylorus about an inch from the stomach, which was sutured over with two rows of chromic catgut. Drainage was inserted in the pelvis through the appendicular incision.

Patient made an uneventful recovery and was last seen about six months after the operation, and had been perfectly well up until that time. Have not been able to locate him since.

This case was operated upon by my brother and associate, Dr. J. G. Matthews.

Case 2—May 28, 1911.—Was called early in the morning, but being unable to go myself, sent another physician. He sent the patient into the hospital with a diagnosis of acute appendicitis. Immediately upon arriving I saw him, a man of 38 years, occupation a teamster, being powerfully built and muscular. His family and past history of no value.

Gives history of having had for some time a gnawing and burning in his stomach, but it was never so severe as to hinder him from attending his usual work. He never restricted himself as to his diet. This annoyance was of such small consequence that he never thought it worth mentioning, but now recalls that he had it off and on for quite a while between meals.

After eating his breakfast went out to hitch his team, and while doing so he was taken with a violent, lancinating pain through his upper abdomen. The pain was so great that he dropped to the ground and remained there until his neighbors carried him into the house, at which time they telephoned for me. He vomited two or three times but no blood. When he arrived at the hospital I found him in great pain, although not as severe as it had been at first, he having had a quarter of a grain of morphine hypodermically. His respiration was shallow and hurried, his abdomen being held tense and boardlike, pulse 80, temperature 98. The physical examination was negative, except that of his abdomen, which was very sensitive, and the point of maximum intensity being in the upper right hypo-gastric region.

Incision was made through the right rectus muscle high up and duodenum at once examined, in which I found a small perforation about the size of a matchstick through the upper anterior surface of the gut. This was sutured with two rows of linen thread, reinforced by a piece of mesentery. A stab wound was made suprapubically and a tube put down into the pelvis, put to bed in extreme Fowler position, with saline by rectum. This patient made an uneventful recovery; left the hospital in about two weeks.

He was operated upon about three hours after the perforation had occurred, and would have been an ideal case for gastro-enterostomy, but at this time I never considered such in these cases, but think if I had it to do over again would do so on account of it being such a favorable case. This patient was perfectly well about one year after the operation. I have not been able to locate him since.

Case 3—December 8, 1912.—N. L., age 36, occupation miller, family and past history negative. About 14 years he noticed occasionally he would have a slight attack of indigestion; also in that time he had four or five attacks in which he would have considerable gastric disturbance and marked constipation, loss of appetite. The discomfort that he felt in his abdomen was in the upper left side. He did not give any distinct history of food distress after eating, but he complained of a soreness which was noticeable especially upon pressure, and that had been almost con-

stant for some time past. On the above date, after eating a heavy dinner and feeling unusually well for the past few days, he was going upstairs about 5 P. M., and just as he got to the top he was taken with a violent pain through his upper abdomen, so severe that he fell to the floor and rolled down the steps. He said the pain was worse in his upper abdomen; a short while later most of his pain seemed to be centered in his left shoulder, and he complained of it a number of times during the examination. The tenderness was excruciating in his belly. He vomited several times.

The next day about 2 P. M. I was called in consultation by Dr. Lee Ganson of Odessa, Wash., about 20 hours from the onset of the attack. At this time found the belly very much distended, his eyes sunken, and in general bad condition. The belly was so sensitive that the examination revealed very little, but it was evident that some grave catastrophe had occurred in his belly, and was most probably a perforated ulcer.

It was with difficulty that I was able to persuade him to have anything done, but by influence being brought to bear by friends and relatives he consented to have the operation.

The incision was made through the right rectus muscle. The belly contained considerable quantity of muddy fluid, and there was found a perforation at the beginning of the pylorus, anterior surface, which was sutured with two rows of linen thread and fortified with a piece of omentum. A stab wound was made suprapubically, a tube inserted into the pelvis for drainage, there being no attempt to swab out the belly. Patient was placed in bed in the Fowler position with continuous proctoclysis. He did unusually well for the first few days, but eventually developed an accumulation of fluid in his chest, which was aspirated on two occasions, but reoccurred, and eventually became purulent, which made it necessary to resect a rib and drain. From this on he made a slow but perfect recovery, and is today perfectly well, and has had no further gastric trouble.

Case 4—May 21, 1913.—McC., age 40, occupation electric engineer. Father died of dropsy, otherwise family history negative. Past history of no consequence. Claims to have always been a heavy eater and never had any gastric disturbance until 3 or 4 years ago, then occasionally coffee which he would take for breakfast would give him some discomfort, but not at any other meal did he notice this; also recently he has noticed that if he ate salads and such food late at night it would give him considerable gastric disturbance. About two weeks ago he began to have indigestion and some pain in his upper chest. He said the food would lodge in his stomach and remain there like a ball. Usually when he awakened in the morning he felt pretty well, but a couple of hours after eating breakfast he would notice there was a gnawing distress in his stomach, and occasionally he would vomit, and recently has had a feeling of discomfort in his upper chest. Two days ago

he went out to his country home, and while there he felt rather uncomfortable in the upper abdomen, and came home in his machine. Upon arriving he was unable to get into the house, the family being away. He was then taken with a violent pain through his upper abdomen, but managed to get into the next-door neighbor's, where he had his family and a doctor called.

He was then transferred to his home. Had vomited a number of times. I was called in consultation about 40 hours from the onset of the acute trouble by Dr. E. L. Kimball of Spokane, who also assisted me in the work. At that time the patient's belly was very much distended, pulse 102, temperature 98. He vomited persistently, and had been hiccoughing for the previous 36 hours. The first thing that he complained to me about was the severe pain in his left shoulder, and this he had been complaining of steadily from the onset of his trouble. The point of most sensitiveness was in the right upper epigastric region. He was bathed in a clammy perspiration, and was rather sluggish in responding to questions. His respiration was shallow and jerky, belly distended and tense; his skin and conjunctiva had a yellowish tinge, which made me suspicious of some obstructive conditions of the bile ducts, and possibly a ruptured gall bladder. An unfavorable prognosis was given. I had him transferred to St. Luke's Hospital, where a right rectus incision was made. The belly was full of purulent watery material. Perforation was found on the posterior surface, well down on the first portion of the duodenum. This patient had a very stormy siege for several days, then began to convalesce. After about 10 days began an irregular temperature, when eventually we located a pocket of pus down in the right subphrenic space, which was drained. From this on he made an uneventful recovery and is well and strong today.

Case 5—July 24, 1913.—C. A. M., male, age 22, occupation a surveyor. Family and past history negative up until one year ago, when he began to be bothered with some stomach trouble, feeling of distress in his abdomen, which would come on when his stomach was empty, and would be relieved by the taking of food. The discomfort was mostly about 4 o'clock in the afternoon. He would often lie on the bed before his evening meal on his back, which seemed to give him some comfort.

This discomfort which he has had for the past year has never been so severe as to keep him from his work, nor has he restricted himself as to his diet. He knew some foods were more distressing to him than others. It was a common thing for him to have a certain amount of discomfort a couple of hours after eating, which he noticed was relieved for a short while by the drinking of water or taking some kind of food.

On the 23d of July he did not eat anything during the day. That evening when he was getting ready for his supper in reaching up he was taken with a violent stabbing pain through his upper abdomen. At that time the pain seemed to be most intense on the

right side high up, but later he complained of considerable pain referred to his left shoulder, and this was most marked about an hour after the perforation. He claimed that the pain in his left shoulder seemed to be worse than that in his belly, but on motion or any pressure the pain was excruciating in his belly. He was operated upon about 15 hours after the perforation. A McBurney incision was made over the appendix, which was found not to be the cause. The belly contained a quantity of cloudy fluid. An incision was then made in the right upper belly. A perforation was found in the first part of the duodenum on the upper surface. The same was sutured with two rows of linen, belly drained through appendicular incision by a split tube into the pelvis.

Patient made an uneventful recovery and is now perfectly well, weighs more than he ever did, and is working every day.

This case was operated upon by my brother and associate, Dr. J. G. Matthews.

Case 6—November 9, 1913.—Mrs. W. O., age 34. Had one uncle on father's side die with tuberculosis, also one aunt on mother's side, otherwise family history negative. Had measles, mumps and chickenpox when a child; began to menstruate when 14 years of age, regular, of the six-weeks type, with very little discomfort: has had five children and two miscarriages; was badly torn with the first child, and had what she called bed fever when the second was born; was ill about six weeks.

About 12 years ago was operated upon for perineal teares and retro-displacement of the uterus, and following this operation she claims to have had considerable gastric disturbance, which lasted off and on for three years. This discomfort would begin about an hour after eating. There were certain foods that she avoided, for they gave her considerable discomfort. Raw apples was one thing that always gave her distress.

This condition gradually improved and she thought herself well, but five years ago she had an acute attack with her stomach, and was very miserable for three months following. Any foods would give her discomfort, and she had a referred pain in the anterior chest about midway of the sternum, but during these three months her stomach had a burning sensation the whole time when it was empty. The taking of food relieved it. Following this attack she was pretty well up until last June, save eructation of gas. At that time she had a very similar attack to what she had five years previous, but it only lasted a short while. About six weeks ago her stomach began to give her distress, and this discomfort was most marked about an hour to half hour after eating. She found that taking food in small quantities would give her relief.

This A. M., while still in bed, about 6 o'clock, she was stretching, and was suddenly seized with a violent epigastric pain which was most distressing. The severeness of the pain lasted for about half an hour and then became very much less severe for 15 minutes, and she thought it would pass away, but was seized again

with a similar pain, which continued. She vomited, but no blood. Her family physician was called, Dr. J. W. Sherfey, of Washtucna, Wash., who referred the case to me. It was necessary for him to give her several doses of morphine, and eventually resorted to the use of a little chloroform at frequent intervals to relieve her pain, which seemed to be uncontrollable otherwise.

The pain was first in the upper abdomen; later complained of it being in the anterior chest and between the shoulder blades. About one hour after the perforation she had a referred pain to both shoulders. She expressed it as a drawing pain and of considerable severeness. In questioning her as to the location of this pain she said it seemed to be in the joint and on top of the shoulder.

In making the physical examination about 16 hours after the onset of her trouble she was then under the influence of an opiate. From the history I had made my diagnosis of a duodenal perforation, but upon examining her, to my surprise, her belly was rather lax, a soft distension, and at that time not suffering any acute pain, her point of maximum tenderness being in the upper right epigastric region and extended down over the appendix. The left side of the belly on pressure was not so sensitive, and the pain was referred to the right side upon pressure. Her pulse was 104, temperature 98.6. I advised an immediate operation, but now I was not absolutely certain that it was perforation, although the history was quite typical.

She refused to have anything done, was put to bed until the next morning, at which time her condition was but little changed from the night before. She had had some pain, but it was not of a severe character. Her belly was a little more distended, pulse 100, temperature 99.6, but she consented to have the operation.

An incision was made through the right rectus muscle, and upon opening the abdomen found it full of muddy fluid and considerable amount of organized lymph in the neighborhood of the pylorus and gall-bladder, and upon examining the pylorus I overlooked the perforation; then examined the gall-bladder, and finding no trouble there went back to the pylorus and found a very small perforation on the anterior surface of the first portion of the gut not larger than a knitting needle, and at that time not leaking; it seemed to have been plugged with a piece of lymph. Around the ulcer it was much indurated for an area about the size of a dollar, which made it difficult in placing my sutures, for the gut was quite friable. I managed to bury the perforation under two rows of linen suture and fortified the area with a piece of mesentery, made a stab wound suprapubically and inserted split rubber tube for drainage.

The drainage was very profuse the first 12 hours, making it necessary to change the dressing many times.

This patient made an uneventful recovery and is today as well as could be expected in such short time since the operation.

MEDICAL GYNECOLOGY.*

Wm. T. Watson, M.D.

The general practitioner and the specialist are both here to stay, the work of the one supplementing that of the other, each doing for the sick what the other can not.

In reviewing my work as a general practitioner, I find that I attend from 90 to 95 per cent. of the ailments which occur in the families under my care, referring to specialists the other 5 to 10 per cent. I strive to make the welfare of the patient the only point in deciding whether to treat or to refer.

I have selected from my records for presentation tonight two classes of gynecological cases which I have treated in recent years. I am sure that it will be readily conceded that most of these cases properly remained in the hands of the general practitioner. It is quite possible that some of them might have fared better at the hands of the specialist. Upon this point I will welcome frank criticism.

I.

Some Wonders of the Pessary.

Some years ago, under anesthesia, I replaced a uterus and used a pessary. Two months later my patient demanded that I perform an abortion upon the ground that had I told her of her increased liability to pregnancy she would have kept her ailments. I did not perform an abortion, neither did I get my fee for replacing the uterus. She changed physicians and never had the baby. I can recollect a number of cases where pregnancy rapidly followed a replacement, and am sure that there are many people who owe their existence to a pessary.

Stomach Symptoms of Reflex Origin.

Aside from its role in increasing the population, the pessary has many other achievements to its credit.

Its agency in the cure of what appears to be stomach trouble is, I think, illustrated by the following cases:

Mrs. J. B. For two years had suffered with attacks of nausea, vomiting and faintness. Had lost much in weight. Had given up all social life because she so frequently became suddenly and alarmingly ill. There was no complaint of pelvic discomfort and her country physician made no examination. He explained her condition on the theory of frequent conceptions followed by frequent early abortions. The patient and her husband came to see that this theory failed to harmonize with all the facts in the case, so she was brought to the city.

Outside of her emaciation the only demonstrable lesion was a badly retroverted uterus. This was replaced and a pessary introduced.

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*Read before the Baltimore City Medical Society, February 20, 1914.

From that hour she had no nausea. She steadily gained in weight and strength for one year, when she became pregnant. When three months pregnant the pessary was finally removed.

Here the pessary certainly cured the stomach symptoms and was almost as certainly responsible for the existence of a much-desired girl baby, as eleven years had elapsed since the birth of her last child.

Mrs. R. N. C. Aged 22 years. Married three years. One child 18 months. One miscarriage six months ago. Complained of weakness, loss of weight, frequent nausea, soreness in epigastric region not associated with time of eating, occasional faint spells, and almost constant pain in lumbar region.

A general examination was negative with three exceptions: Hemoglobin 80 per cent., abdomen generally hyperesthetic, uterus retroverted. Test breakfast showed some hyperacidity.

I replaced the uterus and used a pessary. She protested against this because many previous attempts had been futile and she had no discomfort from the misplacement. A properly modified pessary proved successful. I also prescribed a diet.

The patient at once lost her nausea and faint spells and the backache improved. Her weight went from 113 to 130 pounds. My diet list was soon forgotten. On the four or five occasions in the past two and a half years on which nausea has returned it was always associated with a lateral displacement and disappeared promptly on readjusting the pessary. The stomach symptoms were doubtless of reflex origin.

Miss H. For several months menstruation was increasingly painful. Then she had a menstrual period accompanied by severe pain and vomiting. The vomiting continued for seven days after the cessation of the menses, and for this I was consulted. I found the uterus completely retroverted. Its replacement with the use of a pessary stopped the vomiting at once and the next menstrual period was painless. The pessary soon caused ulceration and was removed. There was no return of retroversion or of symptoms.

Mental Depression of Reflex Origin.

The next three cases illustrate the agency of the pessary in the relief of distressing mental states.

Mrs. A. N. Had a complete prolapse of uterus and bladder, associated with malaise, nervousness and great mental depression. Life was not worth living. The use of a Zwank pessary completely changed the picture and she was practically well again. Tiring of the care of this instrument she decided to undergo an operation. For some months this was successful, and then the bladder became prolapsed, accompanied by the same mental and nervous symptoms, accentuated by the knowledge that the operation had been a failure and the fear that further relief was not to be had. The Zwank pessary could not be used. An inflatable pear-shaped pessary was introduced, and again the picture changed. This has been worn for a year and the patient is in robust health and fine spirits.

Mrs. B. Since birth of her last child, three years ago, had been steadily losing in vigor. Had to give up housekeeping and go to boarding. Was not equal to caring for her two children and one room in a boarding-house. Felt as though her brain was in a vise and as though she would go mad. She had no pelvic discomfort.

A general examination was negative except that she was thin, her hemoglobin 70 per cent., her uterus retroverted and cervix lacerated.

The uterus was replaced with considerable difficulty and a pessary inserted.

A week later her husband said I had worked a miracle—that his children were being looked after and he could get his buttons sewed on. The patient said that her brain had been immediately relieved from compression, and melancholy had given way to cheerfulness. This condition continues after the lapse of four months.

Mrs. T. S. N. Seen seven years ago at age of 54 years. Had a complete tear of perineum with eversion of rectal mucous membrane, dating back many years. Had also a complete prolapse of uterus and bladder. Could walk but a few squares. Urination every few minutes. Was nervous and melancholy and at times almost frantic. After replacement and the use of a Zwank pessary the frequent urination ceased and patient could go down town on long shopping trips. Her mental state underwent just as complete a change for the better. Is still wearing the pessary with the same satisfaction. This patient has diabetes. Because of this and her complete relief I have not urged operation.

II.

Dyspareunia and Allied Troubles.

One of my patients once lamented that she could not have gone on courting all her days; courtship had been so sweet and married life so bitter. She was suffering from dyspareunia.

I have met with a good many cases in my practice where marriage, instead of being a proper climax to the anticipation of lovers, has proven to be a rude and disappointing anti-climax because of pain in coitus. While the pain is endured by the wife, the husband cannot derive pleasure while causing suffering to another.

In the last three or four years I have seen a greater proportion of such cases than formerly, probably because I have seen the necessity of more frequently asking my patients about such matters.

The causes and treatment of painful and difficult intercourse are various, as will be seen by the different groups of cases which follow:

Hymenal Obstruction.

Mrs. C. D. Aged 23 years. Seen in December, 1913. Married in March, 1912. For one month coitus impossible. Then with much pain and hemorrhage it was effected. For four months

there was no pain and no pleasure—then a month of normal sexual gratification, when, in the words of the patient, "married life seemed worth while." Became pregnant, and was uncomfortable ever after, and intercourse ceased to give pleasure. Now in fifth month of pregnancy.

Mrs. B. A. Aged 22 years. Seen in January, 1914. Married two years. Pregnant five months. Coitus not accomplished for *one year,* when, under ether anesthesia, her physician trimmed away a thick, tough hymen. Five weeks later there was intercourse without pain. Patient has never experienced the slightest pleasure, but keeps this a secret from her husband.

Mrs. S. K. Seen in October, 1913. Married one year. Pregnant four months. Two months elapsed before intercourse was effected. Trouble seemed to be due to tenderness and spasm. After it was effected an obstruction seemed to be met with in the vagina which gave rise to pain in lower abdomen. Intercourse rarely indulged in and never a source of pleasure.

Examination: Hymen had never ruptured; had stretched without breaking. Uterus sagging backwards was squarely across the vagina. Pressure upon it gave the pain complained of during coitus.

The hymen was largely removed with tonsil punch. One week later the vaginal orifice still tender and intercourse had not been attempted. Patient hoped it would never occur again, as it had become repugnant to her.

Seen four days ago. Now eight months pregnant. Had not permitted intercourse for four months.

Obstruction Due to Faulty Repair of Perineum After Childbirth.

Mrs. G. R. Six years ago, following the repair of an extensive perineal laceration after childbirth, there was several months when intercourse was impossible. Under an anesthetic I stretched the vaginal orifice. The patient then moved to the country. Recently she reported that the stretching had effected a cure.

Mrs. S. R. Two months after the birth of her baby reported that coitus was impossible. Inspection showed that a thin web of mucous membrane had been misplaced in stitching up the perineum and acted as a barrier. A cure was promptly effected by clipping the membrane antero-posteriorly and the insertion of two catgut sutures.

Obstruction Due to Faulty Repair of the Perineum by the Surgeon.

Mrs. S. L. Tiring of a pessary, was operated on for a retroversion. For about seven years this was successful. During this period she gave birth to two children. Retroversion occurred again in November, 1912, and a second suspension was done in December, 1912. Along with this operation was another for relaxed vaginal outlet. As she was leaving the hospital she was

advised to use a douche. She found difficulty in introducing the nozzle; felt as though she had been closed up entirely. For several months coitus was impossible. After the lapse of fourteen months coitus was possible, but was always painful. Felt as though the trouble was at the entrance. Patient always more amorous than husband. Her mind dwelt upon this changed condition and she was quite depressed.

Examination showed the vaginal outlet to be contracted and quite tender. Under local anesthesia I incised the obstructing tissue, and a cure has resulted.

Lack of Desire and of Normal Secretions.

Mrs. G. D. Aged 27 years, married three months. Coitus always painful at the beginning and a feeling of being overstretched afterwards. Does not know what sexual desire or gratification means. Her sexual organs seem dead to her except for the sensation of pain on intercourse. On examination nothing abnormal found. The trouble seemed to be a lack of desire and of normal secretions. Artificial lubrication recommended, which was of some benefit. Is now pregnant, and this may rectify the condition.

Mrs. S. G. Aged 30. Married three years. Coitus daily for first year. Now once or twice a week because her general health is impaired. Thinks her husband is large. Coitus at times difficult and painful at the beginning; at other times normal. If husband is under the influence of liquor, coitus is distasteful and quite painful. The difficulty here is apparently due to mental attitude and consequent lack of normal secretions.

Malposition of Vaginal Orifice.

Mrs. B. *Married three weeks.* Coitus not yet accomplished. On examination hymen was thick, intact and very sensitive. Portions of the hymen were excised with a tonsil punch.

Three months later she reported that intercourse could only be effected by approach from the rear, which was a source of dissatisfaction and humiliation, and coitus had become very repulsive to her.

I now found that when she was on her back the lumbar region was greatly arched and the vaginal orifice close to the table.

At the end of another month conditions were not altered. While she was on my table I told her that I wanted an X-ray made of her spinal column. While this conversation was in progress I noticed that her lumbar region was in contact with the table and the vaginal orifice in normal position. The whole trouble was of nervous origin, mental excitement of any kind causing this peculiar contraction of the back muscles.

When the situation was explained to her the trouble was at an end.

Hyperesthesia or "Vaginismus."

Mrs. Z. Consulted me because of an intermittent pain in right inguinal region. On attempting a pelvic examination it developed that although she had been married two years intercourse had not

yet been possible. The abdomen was hyperesthetic and exceedingly ticklish. Vaginal orifice hypersensitive; hymen thick and opening small.

Under cocaine, pieces of the hymen were removed with a tonsil punch.

Two weeks later coitus still impossible.

I then lost track of her for ten months, when I was told that she had become pregnant. Of course this does not necessarily imply that intercourse had actually occurred.

Mrs. C. Has been married 10 years. Is very desirous of offspring. Coitus so painful that it is only attempted about twice a year, and then at her request. Examination is negative except for a condition of hyperesthesia.

Want of Correlation Between Husband and Wife.

Mrs. E. M. Married three months. Coitus always painful. No trouble in vaginal orifice, but an obstruction higher up. On examination the vagina was found to be unusually short and the uterus lying far back. A pessary was introduced and the husband told of the condition. With proper consideration on the part of the husband no further pain was experienced.

Mrs. W. K. S. Aged 48 years. Menstruation ceased at 41 years. Married twice, the first time at the age of 18; the second time at the age of 34. With first husband coitus never painful, but was always practiced from the rear because more agreeable. With second husband coitus in normal position, but always with some difficulty and with very little pleasure. Second husband larger than the first. For the past year coitus almost impossible. Examination shows an atrophied condition due to age. Patient told that no relief is to be expected.

Mrs. T. H. S. Aged 55 years. Married for many years to first husband. Coitus never painful. Patient always more amorous than husband. Seventeen years ago, at the age of 38, married her present husband, who is 13 years younger than herself. Second husband larger than first. Intercourse always painful, but not to the entire exclusion of pleasure. Eight or more years ago, at the age of 43, underwent an abdominal operation, after which menstruation abruptly ceased. Coitus soon became more difficult, and two years ago impossible. An examination showed a condition of atrophy, due to age and operation, which precludes sexual relations.

The patient is in a melancholy state; thinks that her husband must be seeking gratification elsewhere, although unaware of any act of infidelity. I was asked to interrogate her husband on this point, but concluded that nothing was to be gained by it. It was a case where ignorance should have been bliss, but wasn't. Nothing short of the castration of her husband would apparently satisfy her.

Mrs. H. Married six weeks. Has lost weight, is nervous, depressed and disgusted with married life. Ever since marriage had

pain in left inguinal region and an uncomfortable feeling in the pelvis.

Coitus exceedingly painful, and not accomplished until five days after marriage. It has occurred almost daily since, the pain increasing instead of diminishing as prophesied by her husband (a widower). Is completely exhausted after the act. The pain is at the vaginal orifice.

On examination the hymen was found to be ruptured and the vaginal orifice exceedingly tender. No pronounced vaginismus. Uterus normal; no tenderness in sides. Husband found to be unusually large.

Less frequent indulgence and the use of a suppository containing one-half grain cocaine and one-eighth grain morphia advised.

A month later the patient was in good health and spirits. Coitus better tolerated, but never a source of pleasure.

Mrs. R. C. Aged 23 years. Married in October, 1913. Seen by me three months later (January, 1914). Coitus always painful. An obstruction seemed to be met with. I had attended the husband prior to his marriage and knew him to be abnormally large. Examination of wife showed vagina small and uterus low down and in the way. A pessary only made matters worse. I told her that if she could have a child that her discomfort would probably cease.

MALPOSITION OF THE UTERUS.

Mrs. T. I have elsewhere related a case where a bride of 24 hours was thought to have appendicitis by a prominent physician in another city and an operation urged upon her. The wedding journey had to be abandoned and she returned to Baltimore. I found the uterus upside down and very tender. After replacement and the use of a pessary all discomfort ceased.

Mrs. B. M. Married three and a half months; pregnant two months. Five days elapsed before coitus accomplished. Since then very little trouble until recently, when intercourse is difficult at the beginning but not later, though husband complains of meeting an obstruction. Asks me to advise husband to abstain during the remainder of pregnancy.

On examination the pregnant uterus is low down, the cervix lying completely across the vagina and resting upon the sacrum.

A pessary was introduced.

At a subsequent visit all discomfort to patient and husband gone, but patient was averse to intercourse. It always seemed as though she were committing a sin. Thought she had remained a maid so long that her mind could not change from the normal attitude of the maid to that of the matron.

Abstinence was not advised.

Mrs. D. L. Aged 25 years. Married seven years. Baby five years old. Since birth of baby coitus always painful, never a

pleasure, now a source of dread, and rarely indulged in. It is followed by aching for next 24 hours. An obstruction seems to be met with.

Examination: Uterus completely retroverted; vagina short. Uterus replaced and pessary introduced.

Five months later reported that coitus was never painful.

Two months later became pregnant, and later on a seven-months' tubal pregnancy removed at operation by Dr. Miller of Washington. (Patient's statement.)

Mrs. L. Married 11 years. No children. Coitus painful when tired out from housework; at other times not. The uterus was small, sharply anteflexed and low down, the cervix coming within an inch of the vaginal orifice. A pessary relieved her of all pelvic discomfort and coitus occurred without the slightest pain.

Mrs. M. L. R. Married two years. Never pregnant but desirous of offspring. Very nervous and tearful. Coitus always painful, makes her nervous, and was usually followed by a prolonged crying spell. Feels as though some obstruction is met with in the vagina, and pressure upon this gives pain.

Examination showed the uterus to lie far back, the cervix resting upon the sacrum. Pressure upward caused sharp pain. The vagina was capacious. A pessary was introduced, which changed the position of the uterus.

Three and one-half months later patient reported that since introduction of the pessary coitus was always painless, and for the first time she knew what sexual gratification meant. She was then six weeks pregnant.

Conclusions.

In thinking over some of the cases where after some painful experiences the patients have developed a strong repugnance to the sexual act, it occurred to me that had a physician early been called and the trouble relieved, the mental attitude might have remained normal.

I find support of this view in this paragraph from Kelly's Medical Gynecology regarding ineffectual attempts at intercourse: "The *libido sexualis* which normally attends and renders transitory the natural pain of the first cohabitation, disappears, and an attitude of anxious expectancy takes its place, which, in time, is converted into apprehension and abhorrence, so that instead of gratification the wife feels disgust, and instead of pleasure, pain."

If this be so, it is an argument for early diagnosis, which can only be obtained in many cases by proper questioning by the family physician when trouble is suspected.

BRIGHT'S DISEASE TREATED WITH POTASSIUM NITRATE.

By John Vassalli, M.D.,
Baltimore, Md.

I HAVE treated over thirty cases of Bright's disease in the last year successfully with potassium nitrate. I will give a short history of eleven:

First.—F. E., barber, 51; drinks occasionally a glass of beer. Urine analysis: December 13, albumen, blood, granular, hyaline and waxy casts; December 16, albumen, blood, no casts; December 25, albumen; December 31, trace of albumen. The next three months sometimes normal, sometimes a trace of albumen. April, urine normal.

In the following four years the urine was normal. Patient died from tuberculosis not long ago.

Second.—K. S., musician, 63; potator. October 18, albumen, uric acid, blood, hyaline casts, pus; October 22, trace of albumen, uric acid, no blood, no casts, no pus; October 27, uric acid, no albumen, no blood, no casts.

Third.—M. W., baker, 48; drinks moderately beer. September 19, albumen, uric acid, blood, hyaline and waxy casts; September 25, albumen, uric acid, blood, casts; October 5, no casts, no blood, uric acid, trace of albumen.

Fourth.—Wm. B., car conductor, 51; drinks moderately beer. January 17, albumen, blood, hyaline and waxy casts; January 20, albumen, no casts, no blood. Patient did not return for treatment.

Fifth.—C. S., shoemaker, 71; drinks moderately beer. March 19, albumen, uric acid, blood, hyaline and waxy casts; March 26, albumen, uric acid, no blood, no casts; April 1, trace of albumen; April 20, urine normal. An examination two years later: urine normal.

Sixth.—Ch. L., saloonkeeper, 50; potator. April 6, albumen, hyaline and waxy casts; April 13, albumen, no casts. Went to Europe.

Seventh.—Mrs. L., 49; abstinent. February 7, albumen, hyaline and granular casts; February 15, albumen, no casts; February 22, albumen; February 29, albumen; March 10, albumen; March 20, albumen; April 9 to April 25, trace of albumen; May 18, normal.

Eighth.—Wm. B., cigarmaker, 63; drinks moderately beer. April 2, albumen, hyaline and granular casts; April 17, trace of albumen, no casts; May 15, normal.

Ninth.—G. R., physician, 72; is suffering from Bright's disease more than ten years. March 25, albumen 0.5 per cent., hyaline, granular and waxy casts; April 8, albumen, few hyaline casts;

April 22, albumen, no casts; June 7, 0.08 per cent. albumen. Discontinued potassium nitrate. June 20, 0.3 per cent. albumen, few hyaline casts. From June 21 took regular potassium nitrate. July 8, albumen 0.2 per cent.; July 15, albumen, 0.15 per cent. Took occasionally potassium nitrate up to September 15. September 15, albumen 0.15 per cent. Took regularly every two hours potassium nitrate. September 26, albumen 0.08 per cent.

Up to date patient takes potassium nitrate one to two times a day, and his urine is free from casts and albumen from 0.08 per cent. to 0.09 per cent.

Tenth.—S. K., artist, 68 years. December 13, hydrops of both legs and scrotum; urine—albumen, hyaline and granular casts.

℞ Prisnitz applications, changed every six hours. Elevated position of legs. Potassium nitrate, 15 grains every two hours. Light diet; four milk punches with egg a day.

December 17, hydrops disappeared; patient can sit up in chair, with legs elevated; December 20, few hyaline casts, trace of albumen.

℞ Potassium nitrate, every two hours 15 grains. Light diet; four milk punches with egg a day.

December 29, no casts, no albumen, patient can walk about; January 3, urine normal, potassium nitrate 15 grains three times a day; January 10, urine normal, potassium nitrate 15 grains three times a day; January 24, urine normal. Patient discharged.

Eleventh.—H. N., druggist, is suffering from Bright's disease over ten years. April 5, concentrated urine, granular casts, albumen 0.7 per cent.

℞ Potassium nitrate 15 grains every two hours; light diet.

April 10, albumen 0.15 per cent; April 17, few granular casts; May 25, few granular casts, albumen 0.1 per cent. The same treatment.

The dose of potassium nitrate is 0.5 to 1.0 dissolved in 20.0 aqua every two hours till the casts disappear and the albumen is reduced to a trace, then the same dose three times a day and several weeks after the urine is normal. Potassium nitrate does not disturb the stomach or the intestines, and has no bad effect on the patient. It acts in some cases constipating, and this action has to be neutralized by a natural aperient water taken every morning.

If hydrops is present, I found the most successful treatment "Prisnitz applications," with elevation of the legs over the level of the pelvis.

The diet: Mostly vegetable and farinaceous food, meat sparingly once a day, buttermilk, milk, milk and egg, with or without liquor.

Under Bright's disease I comprehend chronic and acute nephritis with presence of albumen and casts in the urine.

I will not claim that the disease is curable in the last stages, but I am convinced that it is possible to stay the disease and prolong life.

In cases 1, 3, 5, 7, 8 and 10 was hydrops present.

Case 9 is of ten years' duration. The action of the remedy is made very clear in this case. Till June 7 the albumen was reduced to 0.08 per cent. In the two following weeks the remedy was not taken and the albumen increased to 0.3 per cent., with the reappearance of hyaline casts. In the next three weeks of treatment it went down to 0.15 per cent., and the casts had disappeared. Up to September 15 the patient took occasionally the remedy and the albumen did not increase. Then the patient took potassium nitrate regularly every two hours, and September 26th the albumen was down to 0.08 per cent.

I had intended to collect more material before publishing my experiences, but on second thought in consideration that the death rate of Bright's is the highest next to tuberculosis, it being 75 per cent. of the latter, I would consider it a crime against humanity to delay the publication any longer.

RECORD OF A FRENCH CASE OF FEMININE SEXUAL INVERSION.

By Douglas C. McMurtrie,
New York.

THE study of the phenomenon of sexual inversion as manifested by women is still too young to justify any very didactic conclusions. The most valuable material bearing on some of the problems involved which can be presented consists of accurate and reliable case reports of which there have been far too few recorded.

With the belief that an accurate report of this kind will be found more interesting and more illuminating than generalizations, I venture to present a translation of an unusually instructive case record.

The observers, Dupony and Delmas, report as follows:

"When one speaks of homosexuality one thinks almost always of masculine amours. But uranism is far from being an attribute of the male sex only; on the contrary, feminine inversion is quite as frequent as masculine. It is, however, more easily concealed, but, on the other hand, it finds means for its satisfaction with greater difficulty, often hesitating to break through the restraints

of social conventions and innate modesty. Some conspicuous examples, however, bear witness that this is not always the case.

"We wish to report today, following out the observation of a case of masculine inversion presented at the preceding session, on two cases of feminine inversion, and we shall endeavor in presenting them to show the constitutional character of this perversion as it is regarded by Magna, Garnier and Arnaud.

"Jeanne M., dressmaker, twenty-four years old, came to the clinic on October 20, 1904, with the following record registered by Dr. Legras: 'Melancholic delirium, based on mental debility. Auditory hallucinations. *Blesité* imaginary fears. Partial mutism. Says that she is persecuted by everyone; that her mother wishes to kill her and throw vitriol at her. Voices speak to her of death, etc. She came to the *commissariat de police,* declaring that there had been stolen from her a savings-bank book, and making incoherent remarks.'

"Neither her ravings nor her hallucinations interest us; we wish to speak only of her homosexual tendencies. She made to us in effect an avowal of a passion which she entertained for her patroness. She loved her in a most extravagant fashion, to the point of not being able to work when she saw or heard her in the workroom. She would be obliged to stop her work to admire in silence.

"She presented her infatuation to us as a spiritual affection, psychic only, and erotomaniac in consequence, affirming that she experienced no sexual sensations regarding her patroness. 'The love for me,' she declared, 'is not physical love; it is admiration. It is not sensual love; it is mystic love. It is her appearance which pleases me. I would never have thought of sleeping with her. I would have been ashamed of that * * *'

"Nevertheless, when pressed by precise questions, making her enter into the details of her history, it was possible to discover the sexual attraction and the physical desire.

"She was jealous of the husband of her patroness, and informed herself, according to her comrades in the workroom, regarding the intimacy existing between a married couple. One of the girls having said to her one day, 'that the patroness did not love her husband and no longer had relations with him,' she felt much relieved from the painful thought which had been torturing her, and she took infinite joy in this item of information. She would have been glad if conjugal intercourse had never taken place and would have gladly imagined this and persuaded herself of this belief had not a daughter, alas, been born of the marriage, thus proving beyond refute the existence of such relations.

"Her love was so violent that she was brought completely under the control of her beloved. She submitted in a docile manner to her least caprices, she obeyed her blindly whatever she might be ordered to do. 'This woman,' she told us, 'makes me do whatever she wishes. If she asked it of me, I would steal, I would

undertake violence, I would commit suicide, on condition that she might be with me.'

"She had not dared to declare these sentiments to her patroness, but the silent sorrow of her love was poured out in stifled cries, in ardent letters laboriously written and never sent. This was the substance of them: 'Madame, I love you with an unspeakable love, I am capable of all madness to please you, etc. * * *'

"Her modesty finally permitted one last confidence. She would have been gladly willing 'to go' with her if she (the patroness) had proposed this to her. She would have been glad to give her pleasure. Personally, however, she was content 'to contemplate.'

"In our opinion, Jeanne M. is a decided invert, a constitutional uranist; and her inversion is not purely platonic, erotomaniac in some way, that is to say, accompanied by a sexual anesthesia; but, on the contrary, frankly sexual and endowed with a taste for the voluptuous act. Not only does she feel herself attracted towards another woman, from whom she would wittingly accept voluptuous caresses, but she also entertains a vigorous repugnance to heterosexual relations. Men did not please her, she said, and never had she consented to the intimacy of a man; intimacy she would gladly permit to a woman, even a woman other than her patroness.

"The passion described has not been, however, her only love affair. Jeanne M., before her patroness, had loved other women in the same manner; her last love is only, she assures us, the most ardent and engrossing. To be accurate, therefore, it is not a woman—an individual—whom she loves, but woman in general, her entire sex.

"Jeanne M., on the other hand, an onanist since the age of sixteen, is a virgin. She had never experienced, according to her statement, other than solitary practices; she had never submitted to relations with others. Her original timidity, her inherent modesty—the decrement of which even she herself had earnestly desired—had never been actually broken down, and it is this which explains the restraint of her senses, the apparent absence of physical desire, and the concept of an ideal love, mystic and exclusively theoretical. Had one experience thrown her into the arms of a lesbian, it is certain she would have enjoyed the voluptuousness of their embraces. The attraction of servitude to her patroness, the desire of obeying her meekly, the need of feeling dominated by her—all these appear to us as sexual characteristics of her love."

The authors comment that the subject of this case was evidently a simple invert.

MARYLAND MEDICAL JOURNAL

NATHAN WINSLOW, M.D., *Editor.*

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BALTIMORE, JULY, 1914

MALE STERILITY.

THE time has come when in childless marriage the finger of suspicion should not always point to the woman. To be sure, she is often the offender, but in the event of no child she is not always the party at fault. So in pointing the condemning finger, one should be wary as to the party accused. This not only applies to the husband, but also the physician, as well as friends of the couple. It is only in justice to the female that the physician at any rate should subject the husband to a thorough examination before the woman is compelled to submit to dilatation and the curet. Writing along these lines, Barney, in the *Boston Medical and Surgical Journal,* discusses some of the causes of sterility in the male. He states: There are no very accurate figures as to the frequency of childless marriages. According to Huhner, 10 per cent. of all unions in New York are without issue. But here one must not forget clandestine but admittedly widespread methods used for the prevention of conception before accepting the above-mentioned statistics as absolutely accurate. Therefore the only material on which we can work are those instances in which childless couples come to the physician for relief, and here figures vary as to the proportion in which the husband is at fault. According to the various authorities the husband is at fault from 1 to 80 per cent. of instances. Huhner, in 192 cases from various authors, found the husband responsible in 17 per cent. In view of these facts, the investigation of childlessness should begin with the misroscopic examination of the husband's semen, not with a curettage of the wife. In a series of 37 cases which actually underwent operative interference for the relief of sterility in a large New York hospital, some despite negative pelvic findings, at the end of a year only two became pregnant. It was

only possible to examine four of the husbands of the women in this group. Two were found normal, and in the semen of the other two there were no spermatozoa, and an examination of the genitalia showed evidence of an old gonorrhoea. Bearing these facts in mind, the author of the above article, through the co-operation of several gynecologists, was able to examine the husbands in forty childless marriages. Of these twenty were actually sterile. Yet the wives of four of these had had more or less severe operations done upon them before it occurred to the operator that the husband possibly was at fault. With these facts in hand, should we not be more careful where we put the blame? It teaches, however, a great lesson—namely, before subjecting the wife to operative interference when seeking relief for sterility, first demand that the husband be subjected to a thorough examination by a competent man. As to the causes of sterility in man there are many, such as undescended testicle in some instances, and those rare malformations, epispadias, hypospadias, exstrophy of the bladder, in any of which, though the spermatogenic function may be active, yet owing to the nature of the disability impregnation of the female impossible. Occasionally non-venereal diseases may attack the testicle and produce sterility, foremost among which is mumps. Syphilitic orchitis is another prolific cause of sterility in the male. Abscess of the testicle, likewise tuberculosis, is occasionally followed by azoospermia. Another source of sterility is repeated and prolonged exposure to the Roentgen ray. Though the above mentioned, together with other causes, are the occasional producers of sterility, away and above the most frequent in the male is gonorrheal epididymitis. In summing up his experience, Barney draws the following conclusions:

1. The cause of sterility in man is due to venereal disease, generally gonorrhoea, in the vast majority of cases.

2. Oligospermia or azoospermia may occur without obvious cause.

3. A single examination of the semen is insufficient.

4. Marriages may continue to be sterile, even with the finding of active spermatozoa in the husband, and a normal genital tract in the wife.

5. It is noteworthy that in no case of male sterility regardless of the cause is masculinity in the least impaired.

Medical Items.

Dr. G. Milton Linthicum, Physicians and Surgeons, 1893, and Mrs. Linthicum have closed their town residence, 817 Park avenue, and opened their home at Lyncrest, Linthicum Heights.

The maternity ward of the Hebrew Hospital will be built by John Hiltz & Sons Co. at a cost of $54,300, and will be turned over to the hospital by December 6. It will be one of the most complete in the city, and is the gift of Abraham Mendels in memory of two of his brothers.

Dr. Henry E. Austin of the New Jersey State Hospital for the Insane, at Trenton, has been appointed physician-in-chief of the hospital for the insane at Bayview.

Dr. Kenneth B. Jones, who has been the physician-in-chief at the hospital for some time, has accepted a position at Rosewood Home for the Feeble-Minded, Owings Mills.

Dr. William Eichelberger, who has been at Bayview for some time, becomes resident physician at the hospital for the insane. His assistant will be Dr. Joseph Lipsky of Baltimore, and a recent graduate of the College of Physicians and Surgeons.

Dr. A. Lee Hichew has been appointed medical supervisor of the Franklin Square Hospital, Baltimore, to succeed Dr. G. S. LaWall.

Dr. Frank Martin, 1000 Cathedral street, sailed from New York June 13 for Europe on board the steamer Oceanic, to be absent until August. Dr. Martin will attend the tri-centennial celebration of the University of Groningen, in Holland, at which he will represent the University of Maryland.

Dr. and Mrs. F. H. Baetjer of Catonsville sailed recently from New York on the steamship Kaiser Wilhelm II for Bremen, and will spend the summer traveling abroad.

The Police Board of Baltimore reappointed the Board of Medical Examiners, which consists of Dr. James M. Craighill, chief police physician, and Drs. Hubert C. Knapp, Thomas P. McCormick, Walter F. Sowers and Elliott H. Hutchins.

The twenthy-fifth anniversary of the opening of the Johns Hopkins Hospital, Baltimore, will be celebrated with appropriate exercises the first week in October. The preliminary program provides for addresses and papers by a number of well-known teachers and clinicians, also by graduates of the Johns Hopkins Medical School.

Dr. Adolph Meyer, director of the Henry Phipps Psychiatric Clinic of the Johns Hopkins Hospital, has been appointed a member of the board of managers of the Maryland Training School for Girls.

Dr. Philip Briscoe, Mutual, Md., has been elected president of the State Board of Aids and Charities. The board has named a committee to study the question of co-operative purchasing by the institutions which receive State aid, of which Dr. J. H. Mason Knox is a member.

Dr. Nathan R. Gorter, Commissioner of Health for Baltimore City, has appointed Dr. Alexander J. Gillis assistant superintendent of Sydenham Hospital, to succeed Dr. Walter W. Point, Jr., Baltimore.

A farewell dinner was given recently at the University Club to Dr. R. Martin Bruns, who left Baltimore June 1 to take up the practice of medicine in Indianapolis. Many of the friends of Dr. Bruns were present to wish him good luck. Dr. Bruns is a graduate of the Johns Hopkins Medical School, class of 1902, and resided at 1401 Park avenue.

Dr. Gustav H. Woltereck has been appointed throat inspector in place of Dr. Wilbur P. Stubbs, recently named as a medical examiner of schools.

Dr. Ralph R. Browning, Myersville, Md., has been elected health officer of Frederick county, vice Dr. James M. Goodman of Frederick.

Dr. John McFarland Bergland, Johns Hopkins Medical School, '04, and Mrs. Bergland will close their town residence on Biddle street in July and leave for Biddleford Pool, Me., where they will spend the remainder of the summer.

Miss Grace Elma Uhler, daughter of the late Dr. John R. Uhler, of 1615 McCulloh street, Baltimore, desires to announce that she is prepared to take notes or translate from Greek and German books, pamphlets, etc., into English, and would appreciate work from the physicians.

At the annual meeting of the Medical and Chirurgical Faculty the following officers were elected: President, Dr. James W. Humrichouse, Hagerstown; vice-presidents, Drs.

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Alexius McGlannan, Baltimore; James E. Deets, Clarksburg; R. E. Lee Hall, Pocomoke City; treasurer, Dr. William S. Gardner, Baltimore; secretary, Dr. John Ruhrah, Baltimore; delegate to the American Medical Association, Dr. J. Hall Pleasants, Baltimore; alternate, Dr. D. E. Stone, Mount Pleasant; members of State Board of Medical Examiners, Drs. John McP. Scott, Hagerstown, and Henry M. Fitshugh, Westminster; councilors, Drs. Chas. O'Donovan, Baltimore; Peregrine Wroth, Jr., Hagerstown; Lewis C. Carrico, Bryantown, and William S. Archer, Belair.

The Phipps Psychiatric Clinic of the Johns Hopkins Hospital has engaged two graduates of the Pennsylvania Orthopedic Institute, Philadelphia, for their mechanical and hydratic departments—Miss Katherine Hoffman, formerly of Walla Walla, Wash., a graduate of the Ensworth Hospital, St. Joseph, Mo., and Mr. Jeremiah T. Minahan of Philadelphia, Pa.

Plans for a building for measles at Sydenham have been laid before the Board of Awards. The plans call for a one-story structure with provision for fifteen to twenty patients, the cost to be about $25,000. The new building and edifices now standing at Sydenham can be made to fit into the scheme for a general hospital to be provided out of the $750,000 loan authorized by the recent Legislature. There are about 12 acres of land at Sydenham, and this is declared to be sufficient for a large hospital such as it is proposed to establish.

Dr. John Howland sailed recently from New York for Bremen.

BIRTHS.

To Walter H. Mayhew, M.D., University of Maryland, '01, and Mrs. Mayhew, June 3, 1914, a daughter, Matilda Ruth Mayhew. Dr. Mayhew is a resident physician at the State Sanatorium, Sabillasville, Md.

To George C. Lockard, M.D., University of Maryland, '03, and Mrs. Lockard of 1631 W. Lafayette avenue, in May, 1914, a son. Dr. Lockard is associate professor of clinical medicine and pediatrics at the University of Maryland Medical School.

MARRIAGES.

H. Clifford Grant, M.D., University of Maryland, '14, of North Carolina, to Miss Nora J. Mee of Baltimore, Md., at Baltimore, June 1, 1914. Dr. Grant will take his bride to North Carolina.

J. C. Pound, M.D., Baltimore Medical College, '96, to Miss Bertha M. Costello, both of Baltimore, at Baltimore, June 1, 1914. Immediately after the ceremony Dr. and Mrs. Pound left on an extended automobile tour.

DEATHS.

William M. S. Curtiss, M.D., Baltimore University, 1893; a member of the Connecticut State Medical Society; in 1900 a representative from Cornwall in the General Assembly, died at his home in Bristol, Conn., May 17, 1914, from nephritis, complicated by pleurisy, aged 43 years.

John A. Brobst, M.D., College of Physicians and Surgeons, Baltimore, 1885, secretary to Secretary of the Navy Thompson at the time of the settlement of the Nova Scotia fisheries claim, died at his home in Allentown, Pa., May 4, 1914, from septicemia, aged 61 years.

William H. Minnich, M.D., College of Physicians and Surgeons, Baltimore, 1890; a member of the Medical Society of the State of Pennsylvania, and for eight years jail physician of York county, died at his home in Dallastown, Pa., May 1, 1914, aged 49 years.

Robert R. Norris, M.D., University of Maryland, '78, of Parkton, Md., died at his home May 23, 1914, aged 63 years.

Claude A. Stoncipher, M.D., Baltimore Medical College, '04, formerly of 1655 North Fulton avenue, Baltimore, died from Bright's disease, May 30, 1914, aged 34 years.

Richard Pinkney Blackistone, M.D., University of Maryland, '49, of River Springs, Md., died at his home May 12, 1914, aged 91 years.

David William Bulluck, M.D., University of Maryland Medical School, '73, of 309 N. 4th street, Wilmington, N. C., died at his home May 7, 1914, aged 61 years. Dr. Bulluck was the founder of the Catherine Kennedy Dispensary and Rest, and was one of the organizers of the Associated Charities of Wilmington. He was for many years visiting surgeon to the Atlantic Coast Line, and was one of the organizers and a past president of the Association of Surgeon's of the Atlantic Coast Line.

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WHAT ROLE DOES GASTRO-ENTEROSTOMY PLAY IN THE TREATMENT OF GASTRIC AND DUODENAL ULCERS?

By Frank Martin, M.D.,

Professor of Operative Surgery and Clinical Surgery in the University of Maryland.

AND

RADIOGRAPHIC DEMONSTRATION OF THE FUNCTIONING OF THE PYLORUS FOLLOWING GASTRO-ENTEROSTOMY.*

By Albert Hynson Carroll, M.D.,

Associate in Gastro-Enterology, University Hospital.

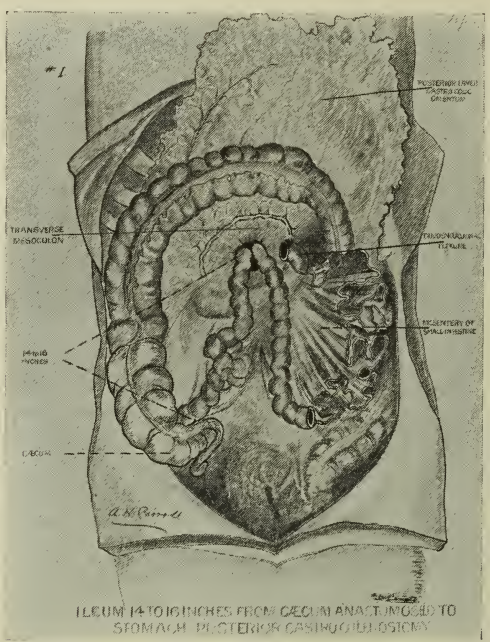
A CASE of recent date that has been under my care, which was so overflowing with interesting findings pertaining to this most important subject, is my chief excuse for presenting a few thoughts on a subject which, doubtless, most of you present regard as somewhat weary and worn out. But in viewing the condition as presented in this above-mentioned case, much food for thought was obtained.

Briefly, the case cited was one of *gastric ulcer,* upon which a so-called *gastro-enterostomy* had been done in one of the Washington clinics. As the case was referred to me by Dr. Albert H. Carroll, and through his courtesy I have been kept in touch with her through the long interval of treatment that has been necessary, I wish to thank him for the interest he has shown in this special case, going so far as to personally prepare for me the accompanying interesting drawings, and likewise for his kindness in offering to interpret the accompanying X-ray plates. In consequence of his familiarity with the case, I beg to briefly report his clinical findings, which are as follows:

"This patient, M. L., is a colored woman, unmarried, aged 26. She has been operated upon three times: first in Washington, six months previous to coming to my service at the University Hos-

*Read before the Medical and Chirurgical Faculty at the annual meeting, April 29, 1914.

pital, and upon inquiry it was learned from the Washington surgeon that he had operated for *gastric ulcer.* He stated that he had done a *gastro-enterostomy.* The second operation was exploratory in character, and was performed after she entered the University Hospital, in this city, nine months ago—June 20, 1913. The object and aim of this second operation was to find out what the condition was and to correct it if possible. There was such chaos found on opening the abdomen that it was with difficulty that the true condition could be ascertained, but after getting it, in a measure, cleared up, a stoma, or anastomosis, was found which had been made between the *posterior wall of the stomach* and the

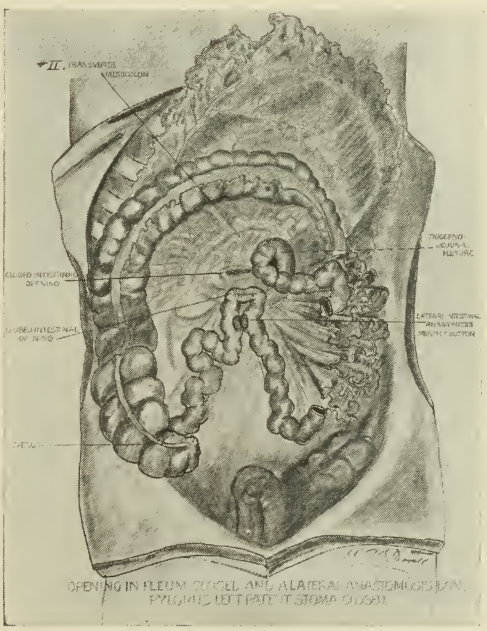


BEFORE CORRECTIVE OPERATION.

lower portion of the ileum. The third and last operation, which was the corrective operation, was done at St. Joseph's Hospital on December 23, 1913.

For the sake of brevity, negative findings will be omitted. Her family history is not important, and with the exception of the present trouble, which began about three years ago, she has been an exceptionally well woman. Neither "family history," "past history" nor "habits" shed any light as regards the etiology. She stated that before she was operated upon in Washington (six months previous to coming to the University Hospital), she had had much pain in the abdomen and in the epigastrium an hour or an hour and a half after eating; that she had vomited blood; that food relieved these pains for a short period, and that she had

become constipated also about this time. These acute symptoms had followed a period of a year of what she called *"bad indigestion."* She states that for a short time after the operation for ulcer, she was relieved of most of these pains, but that later more severe pains, obstinate constipation, vomiting and a sense of great pressure in the epigastrium became almost constant. It is of interest to note that she said that, "once the bowels were freely opened, undigested food was passed for a time, within a few hours after its ingestion." This was later found to be true. Because of these increasing troubles, she came for treatment to the University Hospital on June 20, 1913, where I first saw her.



AFTER CORRECTIVE OPERATION.

It is only necessary to state that the examinations of the respiratory tract, the cardio-vascular and the nervous systems, as well as the genito-urinary tract, were all negative. The examinations by the gastro-enterologist revealed an intense mucus achylia gastrica. There was no blood found in the gastric content, and a specimen, which was bile stained and which was without doubt duodenal content, contained bile, but no blood. This was secured with the Einhorn duodenal tube. A "fasting stomach test meal" of rice demonstrated a *retention* of some of the meal for a *period of 12 hours.* Stool examinations were negative to blood, but at times practically an entire meal of almost unchanged food residue was found three to five hours after ingestion, following "high enema."

The bony framework of the patient is quite normal, with a wide infrasternal angle and the stomach only slightly ptosed and dilated. On palpation of the abodmen there was tenderness in the umbilical region, even on slight pressure, and dull pain in the region of the cecum and ascending colon. There was distention. No tumor mass could be made out. The entire lower abdomen was rather tympanitic and splashing sounds were heard at various times in the ascending colon and in the stomach.

Much difficulty was experienced in securing the earlier series of X-ray pictures, first, because of the vomiting of the patient; second, because of the thickness of the abdomen, and on account of not having at our disposal a strong enough apparatus to penetrate it. These plates definitely, though faintly, demonstrated that some bismuth was leaving the gastric bag, not only by the stoma, but also by the pylorus. The last series was made with a modern apparatus. (Series No. 6, Plates 1, 2, 3, 4.)

Since this dual exit was known, and also because of the persistent vomiting and pains, plus a 12-hour retention, notwithstanding the usual treatment, consisting of lavage, liquid diet and HCL, it was deemed best to open the abdomen, not with the expectation of finding an ulcer, but because partial occlusion was suspected, not only of the stoma, but of the pylorus."

First Operation—Findings at Operation—June 20, 1913.

The operation was a distinctly exploratory one, done to relieve abdominal discomfort. The appendix was found to be very ugly and chronically inflamed; but this was absolutely incidental. She had a very chaotic condition, many adhesions, and when I got down to the pylorus, I found that patent, and no evidence of any stenosis at that point. Then I sought for the site of the gastro-enterostomy which we had been told had been done. This search was attended with great difficulty on account of the tremendous mass of adhesions in and about the upper abdomen. There seemed to be a loop of small intestines which was not strangulated, but the lumen of which was largely obstructed from the adhesions, and twisted upon its mesentery in such a way as to make almost a definite hernial ring, and impinging upon another loop of small intestine which got into and under these bands of adhesions. After getting this chaos cleared up, I found an anastomosis on the posterior wall of the stomach, but instead of its being between the posterior wall of the stomach and the *first portion of the jejunum,* to my utter surprise I found it has been made between the *posterior wall of the stomach* and the *last portion of the ileum,* about 20 to 24 inches from the ileo-cecal valve. There was so much difficulty in finding the anastomosis and getting down to the seat of the new stoma and straightening out the adhesions that I did not dare prolong the operation further, for fear of shocking the patient beyond repair. So I left this anastomosis as it was and simply removed the appendix, which was in marked need of

removal, and closed her up with the definite understanding that she should be told of the condition and later some effort at repair be made.

The true status of the case was that since the pylorus was patent, the food contents of the stomach found their way out through this natural outlet. The small intestines were able to carry on their physiological function, in spite of this patent side-tracking stoma. Thus nourishment was kept up. This case beautifully exemplifies, or rather, corrects, erroneous ideas that some may entertain as to the movement of gastric contents after gastro-enterostomy. * * *

The patient was told to report at regular intervals after discharge, and this she did. Although not entirely relieved, she was moderately comfortable for some weeks, although at times the symptoms of vomiting and nausea were as severe as formerly. Five months after the exploratory operation, in November, 1913, she returned for readmission. At this time she was suffering almost constantly, and had lost much weight. No beds being available, she was sent to me at St. Joseph's Hospital. Again medical treatment was instituted, but with little improvement. She was sent to the operating-room on December 23.

SECOND OPERATION—FINDINGS AT OPERATION—DECEMBER 23, 1913.

I operated for the purpose of disconnecting this anastomosis between the ileum and the stomach. After freeing the adhesions in the upper abdomen and getting the coils of small intestines unravelled, the anastomosis was dissected loose, and the operative procedure employed was the same as that which I make use of in doing a pylorectomy; that is, the peritoneal and muscular coats of the stomach were dissected back to the submucosa, which was clamped and ligated and severed by thermo cautery and then invaginated with purse-string sutures. The same procedure was made use of in closing the ileum after the anastomosis was disconnected. I found that in invaginating the lateral opening into the lumen of the ileum that it diminished its lumen to such an extent that I was afraid it would be impinged upon, and not be sufficiently large for the passage of the food residue; so rather than trust to it absolutely, I concluded to do an entero-enterostomy or a lateral anastomosis in this loop of the ileum immediately adjacent to where the anastomosis was done. This was done by the use of a Murphy button in order to save time. The abdomen was closed and uninterrupted recovery ensued. (Diagrammatic drawings, Nos. 1 and 2.) The Murphy button was passed on the thirteenth day after the operation. She was discharged apparently in excellent health on January 21, 1914.

Later Observations.—The patient reports about twice a month. She is able to cook and do the laundry work for a family of four. She is obstinately constipated; but as a whole considers herself

to be well off.* At no time since she first came under observation have there been any of the classic symptoms of gastric or duodenal ulcer, either before the gastro-ileostomy was undone or since that time. The reading of the X-ray plates will demonstrate the conditions before and after the gastro-ileostomy was undone and the pylorus allowed to functionate normally. (Series No. 6.)

The findings and the facts noted in the above case bring up many interesting points. And among these, apart from the unusual and unheard of point of anastomosis, the one of the most interest to me was the beautiful demonstration that I was able to give at my first operation of the stomach peristalsis. In spite of its dual openings, its definite peristaltic wave continued, conducting the gastric contents to the pylorus regularly and rhythmically, in spite of the fact that the new stoma was still patent and sufficiently large for gastric contents to go this way. But I say, in spite of this, the definite waves of muscle contractions rhythmically progressed to the normal aperture, namely, the pylorus.

Furthermore, examination of the pylorus revealed no evidence of antral, pyloric or duodenal ulcer then present, or any indications of having been present. These facts, I think, definitely answer the question which immediately arises: If this patient's entire small intestinal tract was side-tracked off by this operation (namely, by an anastomosis being made between the posterior wall of her stomach and *the last portion of her ileum, as was the case*), *in what way did she get nourishment* sufficient to carry on life? As I have said, this question is answered by the fact that in spite of the new stoma, the bulk of the food contents from the stomach must have gone on through the pylorus and down on through the small intestines, and in that way nourishment was obtained sufficient for the maintenance of life.

Now to come back to the subject, what is the rôle gastro-enterostomy plays? It has been largely conceded that many stomach and duodenal ulcers are finally considered grave enough to be classed as surgical (although the treatment offers at best a vexed and perplexing problem to both physician and surgeon). Still, what has been done with them in the past has been the operation of gastro-enterostomy, and this procedure has been resorted to on account of the supposedly favorable influence exerted upon these ulcers of the stomach, situated in the antrum, or at the pylorus, or in the duodenum. It has been the operation of choice, because by adopting this procedure it was thought a condition was established favorable to the healing of the ulcer. However, it has likewise been conceded that this operative procedure has had no effect upon ulcers in other localities of the organ (namely, on the lesser curvature, in the fundus, or elsewhere).

But *have these favorably results following gastro-enterostomy*

*This is no doubt due to the presence of a hemorrhoidal condition, since this symptom has cleared up following a recent operation (May, 1914).

been of lasting nature? I believe statictics show that they *have not* been lasting; but that, on the other hand, recurrence or recrudescence of the ulcers in and about the pylorus and the first part of the duodenum has taken place in at least 45 per cent. of the cases, and that quite a large per cent. of them have later become malignant.

This, although a melancholy truth, is nevertheless a fact; and therefore one naturally asks, is there *no better, or more lasting,* operative intervention for these very important and common conditions. Conditions which are so very far-reaching in their consequences, with the varied array of complications, all of which are so serious in character, such as disabling contractions, obstructions, hemorrhage, perforation and malignant degeneration. Each and any one of these are of such importance as to command a chapter to itself, and thorough study for their correction. Acute perforation of gastric or duodenal ulcer is alone, by all odds, the most serious, and, I might say, the most tragic disaster that can happen in the human body. No disaster in surgery is more perilous nor so rarely recognized early. Does it seem reasonable, then, that an operation such as gastro-enterostomy, with its unscientific principles, could possibly meet and correct these serious consequences arising from stomach ulcer? And yet this has been for years the "cure-all" for almost every stomach malady that exists.

Let us discuss for a moment some of the known factors of interest concerning the influence gastro-enterostomy has upon gastric and duodenal ulcers, and in that way try to modify the operative procedure, in order that it may be more lasting in its effects as applied to the cure of these ulcers.

Since we do not know the etiology or exact pathogenesis, any more than we know the exact cause of cancer of the stomach, we know that with the one, which we regard as the *pre-cancerous condition of cancer of the stomach,* so likewise with the other, that chronic and constant irritation is recognized today, just as it has long been regarded in the past, as an important elemental factor in the etiology. Recently, however, many experimental workers have advanced the theory that gastric and duodenal ulcers are due to infective states of the stomach and duodenum. That given a minute or gross defect in the gastric mucosa, produced by trauma or what not, such minute or gross defects will grow into ulcerations, provided the stomach contains pathogenic bacteria.

Barclay's views and conclusions regarding the etiology are worth while, and I herewith quote the following: "Septic conditions in the mouth or other sources of swallowed septic matter, constipation, mucous colitis and a variety of other conditions are capable of producing spasmodic contractions of various parts of the stomach. The spasm produces a narrowing of the lumen that is of great functional importance, causing a definite obstruc-

tion to the passage of food. By an indiscretion of diet or want of mastication, something too large to pass easily through the channel has to be forced through by powerful peristalsis. This leads to an abrasion at the point where the lumen is narrowed and where there is the constant irritation of food passing over it. A surface is exposed that is not structurally fitted to withstand the action of the gastric juice. In this way an ulcer is formed which in its turn perpetuates the original spasm that determined the site of the ulcer. A vicious circle is established, the ulcer now being actually the cause of spasm that prevents healing, so that even if the original cause of the spasm is removed, there is little, if any, improvement in the local condition."

It seems to me that one must be fully conscious of the importance of this spasmodic element as a complication of organic lesions in this region of the stomach, and this undoubtedly is the most important keynote of the whole argument. Whether the spasm at the pylorus is the effect of the ulcer or, on the other hand, the cause of the ulcer, is a very difficult question to decide. To repeat, since we do not know their exact causation, it is difficult to state definitely just how our therapeutic agents exercise a healing influence on them.

We do know, however, that gastro-enterostomy (and we must understand by that the creation of a new opening between the anterior or the posterior wall of the stomach and the first portion of the jejunum) exercises an influence on antral, pyloric or duodenal ulcers (namely, those situated in the *grinding portion* of the stomach and the first portion of the duodenum) in practically only two ways: either by diverting or side-tracking the contents of the stomach away from the pyloric orifice into the jejunum, or by permitting a reflux into the stomach of the alkaline contents of the jejunum, which neutralizes the acid gastric contents. One of these means alone or both together favorably affects ulceration in these particular areas, and *supposedly* aids in the *healing of same,* but definitely has *no effect* upon ulcers located in other portions of the stomach, lesser curvature, fundus, or elsewhere.

Furthermore, it is pretty definitely understood that when an ulcer is situated in the pyloric region of the stomach, or first portion of the duodenum, there is accompanying it, or in consequence of it, a spastic contraction of the pyloric muscle, which is more or less constant, and in a measure partially, and in some cases completely, occludes this orifice. And in accordance with this belief it is further known that ulcers situated in other sections of the stomach have no such influence on the pylorus. Therefore, when we have this partial pyloric stenosis due to spastic contraction, in consequence of the ulcer, then the influence gastro-enterostomy has is a favorable one, and is exactly the same, *and as favorable,* as the effect obtained in those earlier cases of gastro-

SERIES NO. 1. PLATE NO. 1.

SERIES NO. 1. PLATE NO. 2.

SERIES NO. 1. (CASE 4090) GASTRO-ENTEROSTOMY PLUS PYLORECTOMY.

Plate No. 1. Twenty minutes after a small bismuth meal. The bismuth is leaving freely by the stoma. The jejunum is filling rapidly. There is no evidence of a dragging at the site of the stoma, as in many instances where gastro-enterostomy alone has been done. The outline of the stomach is regular and normal in shape and position, with the exception of the "filling defect" at the pyloric end, where the invagination of the prepyloric portion was done in closing the opening after pylorectomy. Plate No. 2. Taken one hour later. The stomach is nearly empty. Bismuth masses well along towards the caecum. (The first plate in this series was similar to No. 1, but did not tell the story so graphically.)

SERIES NO. 2. PLATE NO. 1.

SERIES NO. 2. PLATE NO. 2.

SERIES NO. 2. (CASE 3789) GASTRO-ENTEROSTOMY.

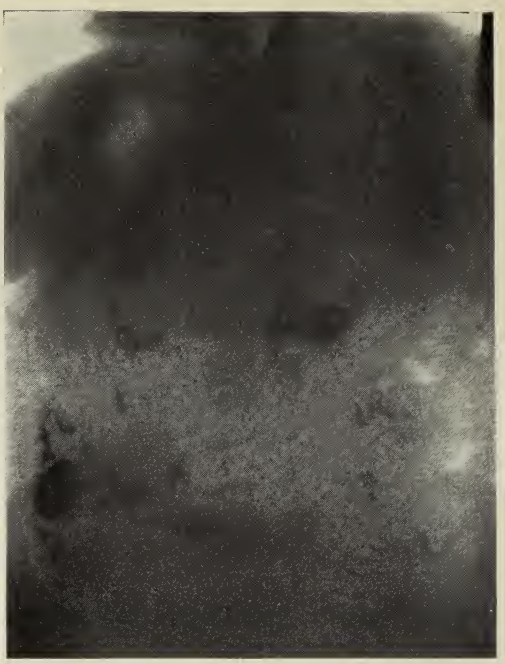
A previous operation for gastric ulcer. Dilated stomach. Vigorous peristalsis in all the plates. Relaxed pylorus in No. 1 and No. 2. Obstruction to the progress of the gastric contents notwithstanding a patent pylorus and a stoma. The obstruction was due to an angulation of the jejunum near the stoma. Great dilation of the duodenum as a result of this. Practically no bismuth was leaving by the stoma. No. 1, "immediate plate." No. 2, one hour later. No. 3, two hours after the first. No previous meal was given.

SERIES NO. 2. PLATE NO. 3.

SERIES NO. 3. PLATE NO. 1.

SERIES NO. 3. GASTRO-ENTEROSTOMY.

Operation six years ago for gastric ulcer. A very large opening was made in this case, as is the custom with this operator. No. 1. Stomach appears to be pulled far to the right and the bismuth is seen leaving the stoma very rapidly, while only a small amount is entering the duodenum by way of the pylorus. No. 2. Two hours later. Stomach nearly empty. A partially or incompletely filled cap, with flecks of bismuth seen in the duodenum, and bismuth well on the way to the caecum. (A previous meal had not been given.)



SERIES NO. 3. PLATE NO. 2.

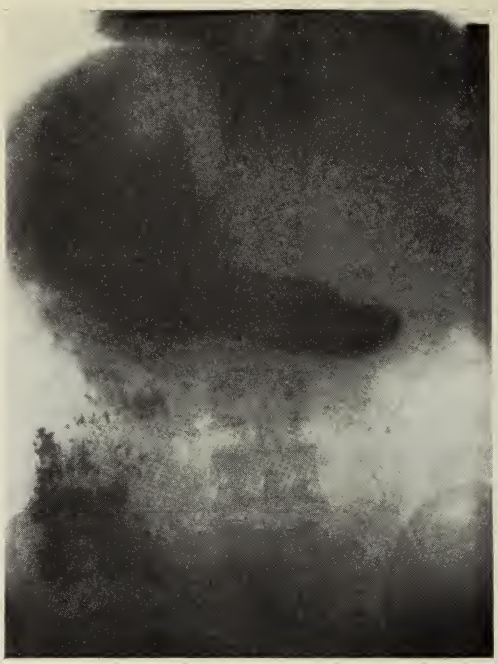
SERIES NO. 4. PLATE NO. 1.

SERIES NO. 4. (CASE 4027) GASTRO-ENTEROSTOMY.

Operation five years ago for duodenal ulcer (?). New gastric ulcer. These plates were taken without a previous bismuth meal and at short intervals. Notice the rapid filling of the jejunum with bismuth, which has entered it via the stoma in No. 1, and the filling of the duodenum in Nos. 2 and 3. The pyloric end of the stomach appears drawn to the right by perigastric adhesions. The first bismuth liberated from the stomach through the stoma (Plate 1) passes on rapidly, and is seen in the pelvis in Plate 2, while in this plate the distended prepyloric portion and the completely relaxed sphincter allows a rapid evacuation of bismuth into the duodenum. No. 3 shows stomach more than half empty, with an hour-glass appearance, faint shadow of bismuth in the duodenum and the residue well along into the ileum.

SERIES NO. 4. PLATE NO. 2.

SERIES NO. 4. PLATE NO. 3.



SERIES NO. 5. PLATE NO. 1.

SERIES NO. 5. PLATE NO. 2.

SERIES NO. 5. (CASE 3382) GASTRO-ENTEROSTOMY.

No. 1. Note the patency of both the stoma in the first plate, as demonstrated by the well-filled loop of jejunum, and in No. 2 of the pylorus, by the bulging of the duodenum close to this pyloric sphincter. In Plate 1 the cap is seen to be partially filled also. The first effort at expulsion of gastric content has resulted in a large quantity leaving the distended stomach by the open stoma, but some of the bismuth has already passed the pylorus. In Plate 2, however, the early and marked egress by the stoma is not observed to continue, and only a faint trace may be seen in this region, while the greatest effort at expulsion is demonstrated by the filling of the duodenum. This dense duodenal shadow is no doubt due to a blocking in the passage near the point of gastro-enterostomy.

SERIES NO. 6. PLATE NO. 1.

SERIES NO. 6. PLATE NO. 2.

SERIES NO. 6. (CASE 3138) ILEUM ANASTOMOSED TO THE STOMACH.

Plate No. 1, taken immediately after bismuth meal, shows the ileum distal to the anastomosis well filled. Plate No. 2, taken forty-five minutes later, shows the upper part of the small intestine becoming filled with bismuth which has entered from the pylorus, as well as a definite shadow of bismuth entering the ileum from the stoma. That which has entered by the normal route shows as a large dark mass in the lower right quadrant of the plate (Plate No. 2). Plates Nos. 3 and 4 were made after the anastomosis of the ileum to the stomach had been undone and the pyloric opening alone left patent. These were taken three months after the corrective operation, which consisted, first, of separation of the ileum at its attachment to the stomach and after the openings in both stomach and ileum had been closed, and a lateral anastomosis done with the aid of a Murphy button. This lateral anastomosis was necessary because of the possibility of a too great construction, which was feared might result from closing the opening in the ileum. Bismuth is seen freely passing through the pylorus, notwithstanding a constriction of the site of corrective operation.

SERIES NO. 6. PLATE NO. 3.

SERIES NO. 6. PLATE NO. 4.

enterostomies performed for starvation in consequence of the pylorus being organically closed by stricture or tumor.

As we all know, in these cases the results are marked and brilliant. The gastric contents no longer pass through the pyloric orifice, but through the new stoma, and thus the irritation from the food, exerting a harmful effect on the ulcerated area, is done away with because of the irritating agent being diverted to the stoma. After healing of the ulcer takes place, if it does, the spasm of the sphincter muscle ceases, and the food contents of the stomach revert back to the pylorus, this now being patent for its exit, and it no longer passes out through the stoma. These are surgical facts—what, then, is the consequence?

There is a prevailing opinion among the many medical and some surgical men that the stomach is a passive reservoir during digestion, and that when a new opening is created at the most dependent point of the organ, that gravity alone will cause the gastric contents to pass through this new opening into the small intestines. Therefore, a gastro-enterostomy has been regarded by them as a drainage operation, and the idea arose in the past that it was of paramount importance that the new stoma must be placed at the lowest point of the stomach, in order to insure good drainage. In order to further aid in the accomplishment of this purpose, the patients have been placed in the upright posture following operation, the operator stating that the gastric contents would more speedily gravitate through this dependent opening. Those who have leaned closely to this idea have been unmindful of the fact of the true muscular contracting force of the stomach, which forces food contents rythmically toward the pylorus, and that its normal physiological propelling power is directed always, as it should be, toward its own natural exit, namely, the pylorus. The drainage opening so called, or stoma, will not drain so long as the pylorus is patent, as is so clearly and graphically demonstrated by the findings in the above case, and from a study of the accompanying X-ray series.

Cannon ingeniously offers valuable conclusions on this subject in his book on the "Mechanical Factors of Digestion," and clearly points out that the stomach is not at any time during digestion in the condition of a passive reservoir. He states: "The cardiac end is exerting a positive pressure, and so long as food is present the pyloric end is the seat of continuous peristalsis, and if the pylorus is patent, these waves of peristalsis direct the food contents to this natural opening, even though there be a stoma, and gastro-enterostomy being a drainage operation, is, therefore, out of the question." It has been experimentally proven that the hydrostatic conditions in the abdominal cavity are such that gravity drainage from the stomach is impossible. As a proof of this last statement, it has been experimentally shown that "when a gastro-anastomosed stomach is filled with water, the latter does not run out of itself, even though the animal is in an upright

position, and, as has been clearly pointed out by Kelling, Cannon and others, it is an important fact to bear in mind that material never *moves along any part of the alimentary canal unless the pressure is greater on one side of it than the other.* Furthermore, it has been shown that the chyme always takes its normal course through the pylorus, if the latter is patent, rather than through any artificial opening."

The conclusions, therefore, may be justly drawn that if the pylorus is patent, the gastric contents are forced out through this natural opening, even though portions at times also pass through the anastomosis. It is only when the pylorus is definitely closed that the entire contents of the stomach pass through the anastomotic opening into the jejunum. This, it seems to me, is the main factor in determining the influence that gastro-enterostomy exerts on gastric ulcers. By the spasm at the pylorus the gastric contents are diverted away from the ulcerated area. But, as Cannon wisely states, "We should not deceive ourselves by the supposition that the operation permits this region to enjoy entire relief from the peristalsis and the undue muscular activity in consequence of it, or the marked hyperacidity which is present in many of these cases." Relief and help does come in this way, and also by the reflux of the alkaline juices from the jejunum; this is conceded to be a fact, and, furthermore, is clinically noted shortly following the operation of gastro-enterostomy.

After healing takes place, the spasm of the pyloric sphincter muscle relaxes. The pylorus again becomes patent, and the stomach contents no longer freely pass through the new anastomotic orifice, but revert back to the patent pylorus. Is it, then, any wonder that there is such a high percentage of recurrences? At least one of the original causes of the ulcer return, the trauma that exerted itself at the pyloric orifice again takes place, the stoma frequently in a measure closes and ceases to afford an exit for the stomach contents, and the old ulcerated area is very likely to start into activity again. These two factors, namely, the new stoma and the neutralizing effect of the gastric content, do not stay the muscle contractility, and therefore does not put it completely at rest, which is so important a factor in healing. I believe the neutralizing effect is not sufficient in itself to be of marked utility. Therefore, we may conclude that gastro-enterostomy can accomplish good only in such ulcers as are situated near the pylorus. This area constitutes four-fifths of the ulcer-bearing area of the stomach. * * *

Barclay and Cannon, along with Hertz, whom both quote, have given a deeper insight into the mechanics of digestion than most of the others put together. Naturally, the surgeon, in dealing with the pathological conditions which he encounters, must base his efforts upon the primary physiological and mechanical facts which have been established.

To sum up, from the surgical point of view, I would say, first, that gastro-enterostomy is of value only in pyloric and duodenal

ulcers attended with pyloric spasm, and is always of lasting effect; second, it can be of no value in ulcerations situated in other parts of the organ, although the symptom of hyperacidity is markedly relieved in many of the cases by it; third, when the pylorus becomes patent, the artificial stoma tends to contract and close, and there is present a tendency for the reformation of the ulcer; fourth, is it not worth while, under these circumstances, to adopt a means which may be of more lasting effect and unattended by this high percentage of recurrences?

The high percentage of recurrences, the serious and ever-present complications, and the tendency to malignant degeneration, which is far more common than hitherto suspected, being estimated as present in 70 per cent. of the cases of cancer of the stomach, warrant, in my judgment, a more radical and efficient method than is offered by gastro-enterostomy alone. Gastro-enterostomy does not offer permanent relief in correcting these complications.

Statistics show that in 70 per cent. of the cases of cancer of the stomach there is a pre-cancerous history of ulcer. These facts alone seem to me to warrant excision of the ulcer-bearing area, and in all cases the operation of pylorectomy offers a greater promise of success than any other operative procedure that we have at our command. The consensus of opinion today is that the ulcer-bearing area should be removed, and it is best removed by pylorectomy. But the criticisms causing it not to be in widespread favor are that it is attended with too high a mortality. This mortality is given from 12 to 15 per cent., whereas the mortality attending gastro-enterostomy is given as 1½ to 2 per cent. I feel that this is an unfair criticism of the procedure, and it appears to me that the mortality that is given is out of all proportion and entirely too high. I further believe that the operation of pylorectomy should be done in such a way as to have the mortality no greater than that attending gastro-enterostomy.

In my own service the mortality attending pylorectomy has been less than the mortality attending gastro-enterostomy. The few cases that I have recently done for ulcers (five in all) have been unattended with mortality, and the surgical recovery was unattended by any serious disturbance. The greatest proof of the wisdom of this operative procedure in these few recent cases has been that in three out of the five the report from the microscopic findings was that of "beginning malignancy." This, I think, speaks more forcibly for the operative procedure than anything I know of.

The operations of pyloric occlusion which have been suggested by numerous operators are inefficient and unscientific, and in no way are to be rationally considered. Such an occlusion as devised by von Eiselberg, namely, by completely dividing the stomach from the duodenum and suturing the two ends, seems to me to offer nothing that is to be commended. The mortality

would probably be quite as high as in a definite pylorectomy, and, furthermore, it offers no protection to the patient from this oncoming possibility of malignant degeneration. Therefore, as gastro-enterostomy alone cannot meet the requirements, in that it does not combat the tendency to malignant degeneration, it should play but a partial rôle in the treatment of gastric ulcers.

There is one condition in which gastro-enterostomy may still be considered the operation of choice: in those cases of benign stenosis where the lumen of the pylorus has been almost entirely occluded and is permanent in character. These cases seek relief from starvation, and are markedly helped by gastro-enterostomy.

Finally, pylorectomy meeting the various requirements, protecting against recurrence of the ulcer, eliminating the possibilities of complications, and removing definitely that chief source of carcinoma, seems to me to merit more definite recognition.

* * * * * * * *

Dr. Martin has very kindly suggested that there be gathered and shown, at the conclusion of his paper presented to you tonight, a series of lantern slides of cases which have had a gastro-enterostomy performed, with the object in view of demonstrating graphically, by means of these radiographs, that gastric contents will continue to pass from the stomach, provided the pylorus is patent, by the pylorus, notwithstanding the presence of the new opening following gastro-enterostomy.

It is not the object to interpret all of the radiographs which are reproduced, and it is only necessary to call attention to those very illuminative features which are common to all. It has been necessary to limit the number of series presented, and also the number of plates in a given series. However, it may be mentioned that the earlier photographs, representing a large number of cases, did not lend themselves for reproduction, having been taken before our laboratory was equipped with a high-power and rapid apparatus. These plates, however, demonstrate as positively, although less graphically, the same phenomena as do the later ones.

Six studies in all will be reviewed. Five of these are gastro-enterostomies, while one is a case of pylorectomy plus gastro-enterostomy. In one the ileum was accidentally joined to the stomach. This last affords material for very instructive study.

At once, *without a further analysis* or discussion, attention might be called to *a shadow of bismuth,* which is *seen in the duodenum in every series.* This is common to all, with the exception of the case in which a pylorectomy has been performed.

This shadow in the duodenum represents bismuth which has come there either by way of the pylorus or it has been forced there against the peristaltic duodenal waves of contraction. If the last be true, it would have left the stomach via the stoma. Again, we can conceive that a portion of it may have made its journey from the gastric bag by both routes.

However, when we bear in mind the greater intragastric pressure found in the prepyloric portion of the stomach, and also remember that the contraction waves continue toward the pylorus without interruption until lost in the pyloric sphincter, we must admit that with a patent pylorus any gastric content caught by these waves will leave the stomach through the pylorus as long as these peristaltic wavelike contractions continue. This has been experimentally shown repeatedly in animals. The demonstration is perfect in the reading of these radiographs in man.

No doubt much confusion and an erroneous conception has resulted as regards the rôle that gastro-enterostomy plays because of a false interpretation of the X-ray plates taken following this operation. We may with profit briefly study the photographs in order to acquire a more accurate conception of the physiological and mechanical principles involved and exhibited by them.

It is noticed that in the "immediate plate" bismuth is seen at once to have invaded the intestine by way of the stoma; while, as a rule, in the same plate, none is seen in the duodenum, although the pilleus ventriculi or "cap" may or may not contain bismuth. It is very easy to jump to the conclusion that "all the bismuth meal will leave by way of the stoma, and that none has or will enter the duodenum normally." First, it must be remembered that the pylorus does not open *immediately* upon food entering the stomach. Its activities depend upon various stimuli, mostly reflex in character, and when it does open, only a *small amount* is allowed to pass at a time. A rapid tube is necessary to "get" this, while the stoma, which is a hole, and not a sphincter, will allow gastric contents to pass if it is forced open or held open.

Immediately following a full bismuth meal, the wall of the stomach at the site of the stoma is stretched. This tends at this time to hold the hole open, and the added pressure present as a result of the distending meal will result in a rapid early passage of a quantity through the stoma. This early portion shows up very clearly in a photograph taken immediately after the meal, while the former or duodenal bismuth in very small quantity may not be seen in the duodenum in the "immediate plate."

A second or later plate in the series always shows bismuth passing through the duodenum. Hence we must not make the mistake of believing that the stoma has afforded the only means of egress when a painstaking and rational study of our series of plates will correct any such false impression.

Before attention is specifically called to the various series reproduced, let us grant that, in X-ray studies, the bismuth continues to leave by the stoma as rapidly later as at first. The stomach then would be empty in a very short time. Actual ballooning of the gut would follow, and symptoms of obstruction would not be beyond conception. We might also anticipate that a reflex closure of the pylorus, which follows the ballooning of

any portion of the small intestine, would take place. *Such rapid emptying does not occur.*

Furthermore, the flow is lessened through the stoma or completely stopped whenever a peristaltic wave passes over the area in which the stoma is located. These views have not been emphasized, and this is my reason for calling attention to them here, in order to make the reading of the plates less difficult. All are no doubt familiar with the fallacy of the "gravity" and similar unsound contentions, hence they are not mentioned.

In Nos. 1 and 2 of series No. 1 we see the shadow of a stomach following *pylorectomy plus gastro-enterostomy.* The stomach is in a normal position. There is a "filling defect," caused by the invagination of the pyloric end of the stomach, after the excision of the ulcer-bearing area. This is in extreme contrast to many other plates reproduced, which show stomachs with the pylorus drawn out of position, with irregular outlines at the site of the anastomosis and in several instances of actual partial obstruction, caused no doubt by kinking, following tension. The bismuth is seen entering the intestine slowly and regularly. There is no rushing or crowding of bismuth in its journey.

In series No. 3, plates Nos. 1 and 2, we see bismuth passing through *both openings in both plates.* In this case a very large opening has been made by the operator. Although the pylorus is pulled far over to the right, there is no blocking from angulation or duodenal kinking. Nor is there a crowding noticed in this series.

In series No. 4, and particularly in series No. 2, the duodenum is greatly dilated. The pylorus is seen to be open in several of these plates, and *bismuth has passed through it,* but has been obstructed in its passage. The bulging has not resulted from pressure on the distal end, where the bismuth may be supposed to have entered from, but this bulging came about because the pumping, grinding prepyloric portion had forced the contents through the patent pylorus and on into the duodenum. Here again is an illustration, only slightly different from the phenomenon observed in the remainder of the plates, of the functioning of the pylorus, notwithstanding the presence of a patent stoma.

Series No. 6, Nos. 1 and 2 are of the case in which the *ileum* had accidentally been *anastomosed with the stomach,* and these were taken before the corrective operation. In No. 1 bismuth is seen leaving by the stoma, while in No. 2 it is leaving the stomach *by both routes.*

After the ileum was loosened from the stomach and the pylorus alone left as a means of exit, Nos. 3 and 4 were taken. In these the pylorus is seen to be properly functioning, and the content is leaving the stomach in a normal manner, notwithstanding the almost "hour-glass" contraction following the corrective operation and the bunching of bismuth in the jejunum and ileum.

The two diagrammatic drawings I and II are intended to illustrate the condition found before the corrective operation and later. (Case No. 6. Ileum anastomosed with the stomach.)

Experimentally, this condition might be brought about in the laboratory, but the discovery of it and the study of it with the X-ray afford valuable and definite information regarding the functioning of the pylorus, which, I trust, these radiographic studies will have proven, functionates, when patent, notwithstanding the presence of a gastro-enterostomy.*

*The radiographs were, except in two instances, made in the University Hospital X-ray laboratory by Dr. Chandlee and Dr. Walton. Without their generous aid this study could not have been made. I wish also to thank Dr. Arthur Shipley and Dr. Spruill for the use of material, and to express my appreciation for the opportunity afforded me by Dr. Martin to read into his paper this brief summary of the cases exhibited.

TREATISE ON DISEASES OF THE SKIN FOR THE USE OF ADVANCED STUDENTS AND PRACTITIONERS. By Henry W. Stelwagon, M.D., Ph.D., Professor of Dermatology in the Jefferson Medical College, Philadelphia; Dermatologist to the Philadelphia Hospital; Consulting Dermatologist to the Howard Hospital, to the Pennsylvania Institution for the Deaf and Dumb, to the Pennsylvania Institution for Feeble-minded Children, and to the Widener Memorial Training School for Crippled Children; Member of the American Dermatological Association; Honorary Member of the Society of Dermatology and Syphilography of Italy; Associate Member of the Society of Dermatology and Syphilography of France, of the Vienna Dermatological Society, and of the Berlin Dermatological Society. Seventh Edition, Thoroughly Revised. With 334 Illustrations in the Text and 33 Full-page Colored and Half-tone Plates. Philadelphia and London: W. B. Saunders Company. Baltimore: The Medical Standard Book Co. 1914. Cloth, $7.50 net.

Since the appearance of the last edition of Stelwagon's Treatise on Diseases of the Skin rapid strides have been made in certain fields of dermatology, notably syphilis, leprosy, sporotrichosis, pellagra, ringworm and tropical affections. In order to bring this standard work up-to-date, Stelwagon has therefore felt constrained to rewrite his book so as to incorporate these changes and make it available to the largest extent. Amongst the other additions may be mentioned prurigo nodularis, granuloma pyogenicum, benign sarcoid and keratosis blennorrhagia. As heretofore, the illustrations are a particularly attractive feature of the book. In fact, the author seems to make a specialty of illustration, and well he may, for a good illustration certainly is of material assistance in enabling one to thoroughly comprehend any given lesion. It is therefore with an easy conscience that we predict the present volume will prove more sought after and useful than any of the predecessors.

THE HEALTH OF THE CHILD IS THE HEALTH OF THE NATION.*

By J. A. Nydegger, M.D.,
United States Public Health Service.

The awakening of the nation has come, and the conservation of our resources is the cry. We are beginning to realize that, owing to our careless manner and methods, the vast natural resources of our country are being wantonly wasted, and there is danger of their exhaustion. Yet, take the most desirable part of the world, stored with great natural resources, and without the brain and brawn of healthy men to develop them, what are they worth? Not one cent. On what does the greatness of a nation depend? Is it in lands? No. Is it in commerce? No. Is it in manufacture? No. Is it in fleets and armies? No. All these are but secondary considerations.

Without health of the people no nation would succeed. *The greatest resource* of a nation is its healthy people—healthy mentally, morally and physically. This great doctrine applies equally as well to the subdivisions of a country, States, counties, municipalities and communities. Without health of the people no nation would succeed. A citizen without health is often a minus quantity when resources are being considered.

The successful completion of the greatest undertaking of the present age, or of any age, the construction of the Panama Canal, was made possible only by maintaining and preserving the health of the people engaged in building it. The great French nation signally failed in this undertaking because it failed to conserve the health of the workmen and guard them from disease.

The health of the people is also the beginning of happiness. Without health there can be but little happiness. The greatest resource of a nation is its healthy citizen, I *repeat,* and health, then, is the first duty of citizenship.

We have been so often told of the value of our grain products, and of our cattle and hog products, but we have failed to realize that the greatest asset in this country from the point of view of dollars and cents is our National *Health.* The capital value of the eighty-five and a half million inhabitants of the United States in 1907 Professor Fisher of Yale University estimates to be at least two hundred and fifty billion dollars. Disease and death result in social waste. It is waste largely because it is preventable. Forty-two per cent. of the one and one-half million deaths in the United States every year could be prevented or postponed. One-

*Address before the Senate Committee on Agriculture and Labor of the Maryland Assembly on the child-labor bill at the request of the Maryland Child Labor Commission, March 17, 1914.

third of the *three* million people who are sick in the United States every year are in the working period of life. Most of these diseases are preventable.

Take the most desirable parts of the world—lands beautiful to behold, with vistas of fertile villages and wooded mountains, wanting but the brawn of man to develop them; to work the mine, to run the mill, to glean the forests: *but without health*, how feeble would the workers be! Here and there a spot would show where venturers had endeavored to till the soil, to work the mine, with but little progress made.

Now that we are convinced that the greatest asset of any people and of any community is health, let us consider for a few minutes what has been done and what *we are* doing to maintain this high standard of health, so vitally necessary for the progress and prosperity of a people.

Every American child is entitled to the best that we can give him in everything—good food, good clothing, good homes with good hygienic and sanitary provisions, good training and teaching and good moral surroundings—to best fit him to grow up into a healthy citizen, well equipped to fight the great battle of life. When we fail to provide these, we fail in a great public duty. We fail to give the child a square deal—the square start in life—we give him a handicap, we start him in life with the worst possible handicap he could have. A poorly-developed body, poorly nourished, with lessened resisting power to the inroads of disease, and he falls an easy prey owing to the lessening of his vitality.

It is also highly important for us to understand that the child is peculiarly susceptible to his environment, physically, mentally and morally, and that impressions made in these tender years are permanent and lasting. The hygiene of early life and of boyhood and girlhood days is of the greatest importance in connection with the subject of political economy and the prosperity of a nation.

It is of the very highest importance that those who are in any way connected with the young should have uppermost in mind that the greatest asset of a State is its healthy citizen, and that unless we do provide proper surroundings and safeguard the child with all these precautions, we cannot expect the children to grow up into healthy citizens.

As a people, we spend comparatively little money on the conservation of health, while vastly greater sums are expended annually in the United States to prevent disease among animals than among human beings. But we are growing, and we are gaining in knowledge in this respect every day, and we expect the millennium will soon be at hand when the public will fully understand this.

The uniform child-labor law, adopted by the majority of the States, making the minimum age of child labor 14 years, is a most excellent law. It is understood that when your Legislature

had this proposed measure before it for consideration two years ago, that as a special privilege to the county canning industries the minimum age was fixed at 12 years.

All of us who know anything about the effects of long and arduous hours of labor, coupled with undesirable sanitary conditions existing in the factories, know of the resulting injuries entailed on the health of the growing child. The younger the age at which these children go to work, the greater is the injury resulting to them, and which is shown in their constitution throughout life. I should say that even 12 years is entirely too young an age for a child to be engaged in labor of this description. Now, to wish to amend the existing child-labor laws so as to permit children of 10 years of age to work in these factories is altogether undesirable from many points of view, and which are too well known to you to require repetition.

The report of the United States Department of Labor, which investigated the conditions as exist in these county canning factories, is available for inspection by anyone who so desires. This report shows that many of the children employed in these factories labor ceaselessly from 10 to 12 hours per day. This labor of itself is a great injury to a child in its tender growing years. The child needs all the recreation and good food, clothing and environment it possibly can obtain to equip it for the battle of life. A child beginning life's battle undeveloped, with poor physique and poorly nourished, begins with a serious handicap, which lasts throughout his life. Another important feature in this matter is that the labor in these factories keeps a child away from school a portion of the time it should be in attendance at school. These canning factories are mostly unhygienic and unhealthy places for an adult to work in for long hours, much less the growing child. The living conditions are equally as bad. The homes are but temporary. Makeshifts are the rule. Unoccupied houses, barns, stables and old sheds are most frequently turned into temporary abodes for the laborers in these factories. The buildings themselves are generally old and dirty and insanitary. I understand that as many as 15 families, consisting of fathers, mothers and children, frequently occupy the same building. No provisions are made for the separation of families. All that marks the living quarters of one family from other families is a boarded space a foot high marked off on the floor. There is no separation of the sexes. The surroundings are immoral, and have a vicious effect on the child.

Now, to lower the age to 10 years, as is proposed by the present bill pending before your Legislature, would be greatly injurious not only to the children themselves, but to children of future generations of those who must engage in this work, and for this reason the present measure should not be passed.

Book Reviews.

THE DIAGNOSIS AND TREATMENT OF DIGESTIVE DISEASES. A Practical Treatise for Students and Practitioners of Medicine. By George M. Niles, M.D., Professor of Gastro-enterology and Clinical Medicine, Atlanta Medical College; Gastro-enterologist to the Georgia Baptist Hospital, Wesley Memorial Hospital, Atlanta Hospital; Consulting Gastro-enterologist to the Anti-tuberculosis Association, Atlanta, Ga. With one colored plate and 86 other illustrations. Philadelphia: P. Blakiston's Son & Co. Cloth, $5 net. 1914.

One would think with the number of excellent treatises on gastro-enterology that there is no need for another. Casually speaking, such is the case, but after a thorough examination of the volume before us we are convinced that it has a field to fill. It is particularly adapted to student and general practitioner's purposes, being written in a not too scientific style, thus rendering a sufficiently comprehensive grasp of the subject possible. An outstanding feature of the book is the space devoted to treatment, and it is this feature that should prove attractive to those to whom it is particularly designed. As a practical guide in the common diseases of the gastro-enteric tract it will be found all that is wanted, sufficiently prolix, but not unnecessarily so, to enable the doctor to grasp the subject under consideration without unnecessary waste of time. A pleasing feature of the book is the number of cuts as well as the amount of space devoted to the most modern phases of gastro-enterology, such as the part played by the X-ray in the determination of disease in this portion of the body. We are pleased to give it our unqualified recommendation.

THE PRACTICE OF PEDIATRICS. By Charles Gilmore Kerley, M.D., Professor of Diseases of Children in New York Polyclinic Medical School and Hospital; Attending Physician to the New York Nursery and Child's Hospital; Assistant Attending Physician to the Babies' Hospital; Consulting Physician to the Sevilla Home for Girls and to the New York Home for Destitute and Crippled Children; Consulting Pediatrist to the Greenwich (Conn.) Hospital, to the Tarrytown (N. Y.) Hospital, to the Englewood (N. J.) Hospital, and to the Lawrence (Bronxville) Hospital; Ex-President American Pediatric Society; Ex-President New York County Medical Society. Illustrated. 1914. Philadelphia and London: W. B. Saunders Company. Baltimore: The Medical Standard Book Co. Cloth, $6 net.

This book, including index, of some eight hundred pages, is about the most comprehensive single volume textbook on children which it has been our pleasure to see. No aspect of pediatrics seems to be so unimportant as to be slurred. Starting with the

nutrition and growth of the newly born, the author successively enters into a thorough withal concrete exposition of examination and diagnosis, diseases of the new-born, diseases of the mouth and esophagus, of the stomach intestines and peritoneum, the rectum and anus, the spleen and liver, diseases of the respiratory tract, of the heart, the blood and blood diseases, the glandular system, the urogenital system, nervous disorders, diseases of the skin, of the ear, the transmissible diseases, unclassified diseases, miscellaneous subjects, suggestions in management, therapeutic measures, gymnastic therapeutics, drugs and drugs dosage. The book is simply but well written, practical and abounding with helpful suggestions. We are particularly pleased with the therapeutic advice. It is this feature which should make the book very acceptable to the profession. Certainly taken all in all, it is well balanced, most practical and well illustrated. It should receive a most cordial reception from the medical profession, as it is along the lines which tend to popularity, viz., practical.

PSYCHANALYSIS: ITS THEORIES AND PRACTICAL APPLICATION. By A. A. Brill, Ph.B., M.D., Chief of the Clinic of Psychiatry and Clinical Assistant in Neurology, Columbia University Medical School; Chief of the Neurological Department of the Bronx Hospital and Dispensary; formerly Assistant Physician to Central Islip State Hospital, and to the Clinic of Psychiatry, Zurich. Second Edition, Thoroughly Revised. Philadelphia and London: W. B. Saunders. Baltimore: The Medical Standard Book Co. 1914. Cloth, $3 net.

Though there has been an immense amount of literature written upon this subject since the appearance of the former edition, the author is still of the same opinion as then; therefore though the present book is much enlarged the new material is only of a confirmatory character and to render the book more practical. This has been accomplished by the insertion of analyzed dreams, discussion of artificial dreams, the unconscious factors in neuroses, collecting manias, pathologic homosexuality, also the addition of a glossary of psychanalytic and psychosexual terms. These additions have tended toward a greater usefulness for the book.

THE CLINICS OF JOHN B. MURPHY, M.D., AT MERCY HOSPITAL, CHICAGO, APRIL, 1914. Published Bi-Monthly. Philadelphia and London: W. B. Saunders Company. Baltimore: The Medical Standard Book Co. Paper, $12 per annum. Volume III, No. 2.

The present number of Murphy's Clinics is replete with useful information to the doctor. The introductory article is devoted to a clinical talk on surgical and general diagnosis as prerequisite to good surgery. Nearly anyone can be trained to cut, but this does not make a surgeon. When we speak of a surgeon we mean a man who knows when and when not to use the knife. We are

sorry to say there are few operators who meet these standards. The beauty of Dr. Murphy's talks consists in the elucidation of the above-mentioned principles. He goes thoroughly and systematically into every case before deciding what line of procedure to follow. These pamphlets of his should go and no doubt are creating an identical system in the work of other surgeons in these United States. Dr. Murphy makes use of all clinical and laboratory findings in arriving at a diagnosis, but as he says in his talk on Abderhalden Test in Tubal Pregnancy, he employs the laboratory chiefly as a confirmatory rather than positive evidence. Besides a discussion of three cases of ectopia testis, he considers at length cholelithiasis, acute pancreatic cyst, duodenal ulcer, goitre, vesical papillomata and a series of articles on neuroma.

Diagnostic Methods. By Herbert Thomas Brooks, A.B., M.D., Professor of Pathology, University of Tennessee, College of Medicine, Memphis, Tenn. Second Edition. Revised and Rewritten. St. Louis: C. V. Mosby Company. 1914. Cloth, $1 net.

This little book should prove an invaluable guide to students in history taking, making of routine physical examinations and the common laboratory tests necessary for students in clinical pathology, hospital internes and practicing physicians. The common and most reliable tests employed in sputum, urine, gastric contents, blood, intestinal contents, etc., are fully explained, so that any physician with a modicum of equipment can, if he so desires, carry out the reactions in his own office. It gives us great pleasure to unqualifiedly recommend the book as absolutely reliable in so far as it goes.

Materia Medica, Pharmacology, Therapeutics, Prescription Writing. For Students and Practitioners. By Walter A. Bastedo, Ph.G., M.D., Associate in Pharmacology and Therapeutics at Columbia University; Assistant Attending Physician to St. Luke's Hospital, New York City; Consulting Gastro-Enterologist to the Smith's Infirmary and to the Red Cross Hospital; Consulting Physician to St. Vincent's Hospital, Staten Island; Fifth Vice-President of the National Convention for the Revision of the United States Pharmacopeia; formerly Curator of the New York Botanical Garden. Illustrated. Philadelphia and London: W. B. Saunders Company. Baltimore: The Medical Standard Book Co. Cloth, $3.50. 1913.

One would say hastily that enough and sufficiently good materia medicas are already on the market. Rashly and without thoroughly inspecting the present presentation the same opinion would prevail, but a thorough study of the manner and method in which the author presents his subject soon awakens one to a realization that he is dealing with a book somewhat out of the

ordinary. Today too little attention is being given by the physician to the possibilities of the employment of drugs in the combating of disease. Such a treatise as the one before us should go a long way in dissipating this indifference of the profession, as the author by experimentation upon animals and observation upon the sick attempts to demonstrate the actions of the various agents described in the book. Everywhere one is impressed with the great reliance he places upon laboratory investigations in the study of drugs. Here as elsewhere in medicine research is coming into its own, and drugs which were formerly supposed to be of great merit have by these measures been found wanting, and vice versa. The book is admirably adapted to student purposes or the needs of the general practitioner. It gives us great pleasure to put our stamp of approbation upon the book, and we heartily commend it to the consideration of the profession.

The Clinical History in Outline. By Paul G. Woolley, S.B., M.D., Professor of Pathology, College of Medicine, University of Cincinnati; Director of Laboratories, Cincinnati General Hospital, Cincinnati, O. St. Louis: C. V. Mosby Co. 1914. Cloth, $1 net.

As most are aware, the usual hospital history is of very little use. This arises from the fact that students are not properly grounded in this important feature ot clinical medicine, so that when they graduate they are at sea when taking a history. To some extent medical schools have recognized this deficiency in their course and are exerting strenuous efforts to correct the deficiency. However, those students and general practitioners who desire a reliable guide in the production of a first-class history will be amply pleased with Woolley's Clinical History in Outline. In general it will be found to supply those seeking such information with the exact thing they are looking for. Here one finds the data required in history taking, the complaint of the patient in his own words, the family history, the personal history, history of the present illness, physical examination and other data necessary to a complete history.

Bedside Hematology. An Introduction to the Clinical Study of the So-called Blood Diseases and of Allied Disorders. By Gordon R. Ward, M.D. (London), Fellow of the Royal Society of Medicine, Medical Society of London, etc. Illustrated. Philadelphia and London: W. B. Saunders Company. Baltimore: The Medical Standard Book Co. Cloth, $3.50 net. 1914.

The book is unique in that it deals with the clinical side of the blood diseases rather than the pathological. The medical profession has long been in need of such a book. Here one finds the latest conceptions concerning the blood-forming organs, viz.: the marrow, the lymphoid tissues, the spleen, the liver, the blood

and its cells; the best and most accurate methods of making a blood examination, treatises on chloroma, myelemia, Hodgkin's disease, Gaucher splenomegaly, localized affections of blood-forming tissues (lymphoma, multiple myeloma, splenic anemia of adults, lymphatism), hemophilia, purpura, chlorosis, leukemia, cholemia, parasitic diseases of the circulating red cells, leucocytosis, etc. Chapter XXII is devoted entirely to the methods of treatment. We agree with the author when he states that most of the morbid processes designated "Blood Diseases" are not in reality diseases of the blood, but of the blood-forming organs. It is not even the case that the changes in the blood-forming organs are necessarily reflected in the blood stream, although this is often so. In Hodgkin's disease and in splenic anemia of adults there is no alteration in the blood in the early stages, and even when this occurs it is of a sort that is shared by many other pathological conditions—in fact, is nothing more than a common type of secondary anemia. The classification employed, though not entirely satisfactory, still, perhaps, with our present knowledge, is as good as any, and should go a long way toward simplifying the so-called blood diseases, and certainly internists and students, by a close perusal of these pages, will arise with a better conception of not only the clinical, but also the pathological, picture occurring in those diseases treated by this volume.

Nucleic Acids: Their Chemical Properties and Physiological Conduct. By Walter Jones, Ph.D., Professor of Physiological Chemistry in the Johns Hopkins Medical School. London: Longmans, Green & Co., 39 Paternoster Row. New York: Longmans, Green & Co. Paper, $1.10 net. 1914.

Though the nucleic acid group constitute the best understood field of physiological chemistry, no comprehensive or complete article reviewing the whole subject has, so far as we are aware, ever appeared in print. The present treatise is therefore indeed welcome, and should fill a vacant niche in physiological literature. Heretofore, when one desired any information on this subject, he was perforce compelled to seek here and there and everywhere for the desired knowledge. Today this task has been greatly simplified by the appearance of this monograph, which briefly, but explicitly, reviews, digests and systematizes our knowledge of the nucleic acids. The book deals with the chemical properties of nucleic acids, the physiological conduct of nucleic acids, etc., including discussions of nuclein, nucleoprotein, nucleic acid, as well as sections on thymus nucleic acid, yeast nucleic acid, the purine derivatives of human urine, the preparation of thymus nucleic acid, the analytical chemistry of the purine derivatives, the analytical chemistry of the pyrimidine bodies, bibliography, etc. It should, indeed, prove invaluable to those physicians working in metabolism, and should lead those workers to a clearer conception of their investigations.

Maryland Medical Journal

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BALTIMORE, AUGUST, 1914

OBESITY.

Physicians meet with no more obstinate affections to treat than obesity. Moreover, it is an exceedingly common affliction, therefore a few words upon its treatment seems opportune. It is a metabolic disorder caused either by defective oxidation of the foodstuffs or an excessive intake of food. In health the body appropriates only enough food for immediate purposes; anything in excess is either retained or must be expended in extra muscular energy. According to J. M. Anders, New York *Medical Journal,* excessive alimentation implies retention of energy, and since most of such retention occurs in the form of fat, obesity occurs. It is well known that many fatty individuals are light eaters. The phenomenon is explained on the grounds that there is an abnormally active absorption of those substances that produce fat. Disease is occasionally manifested by obesity, especially some of the diseases associated with disorders of internal secretion. But in most instances Anders is of the opinion that obesity is due to excessive alimentation and lack of exercise, and should be regarded as a symptom rather than a disease. As it is dependent upon so many different causes, its successful combattal depends upon the removal of the underlying factors producing the fat. If an hereditary disposition to corpulency exists, the fat-forming substances should be reduced to a minimum in the dietary and plenty of exercise indulged in. Imprudence in eating and drinking should in every instance be sought and corrected if success is to follow. Any habits which tend to corpulency should be indicted, such as sedentary habits, especially in the phlegmatic and torpid.

If success is to reward any line of treatment the patient must be under the strictest surveillance, and, according to Anders, falls under three heads—dietetic, mechanical and medicinal. He firmly believes that the reduction in weight must be slowly progressive, and if too rapid the dietary should be made more liberal. This is accomplished principally by the withdrawal of the carbohydrates, and to a lesser degree the fats, from the dietary. The amount of reduction in these substances must be determined for the individual case, and requires time and observation. He permits a limited amount of both carbohydrates and hydrocarbons. According to him, this reduces to a minimum the possibility of digestive disorders or the creation of a gouty diathesis, annoying conditions which are prone to follow other well-known fat-reducing systems. The mechanical management consists in regulated and supervised muscular exercise. As exercise accelerates oxidation, it is but little less important than diet. Besides, it facilitates the destruction of pent-up fat and tones up the circulation and respiration. Naturally, the form depends upon the case. Anders has derived much satisfaction from walking, in combination with gymnastics. Cold and salt-water bathing, followed by massage or rubs, exert a powerful influence in the promotion of oxidation. In those with gouty tendencies warm baths should be substituted for the cold. The medical treatment consists in the taking of the baths, such as Kissingen, Virginia Hot Springs, etc. Thyroid feeding has attained some reputation as a fat reducer, but is dangerous, and should be taken only under the strictest supervision, otherwise unfavorable symptoms may arise, or direct injury may even result. If symptoms of hyperthyroidism arise, tachycardia, nervousness, nausea, thyroid feeding should be withdrawn. Then, the management of obesity resolves itself into the exercise of common sense. See that the afflicted individual corrects his vicious habits and place him under the strictest supervision as regards diet and exercise. If success is to be attained, it is along the dietary and exercise routes rather than medicinal.

Medical Items.

The report of Dr. Winford H. Smith, superintendent of the Johns Hopkins Hospital, for the year ended January 31, 1914, shows an increase in the number of patients and a steady gain in usefulness, efficiency and economy. Within the year the Henry Phipps Psychiatric Clinic was opened. Another important event of the past year was the award of the contract and the beginning of the work on the James Buchanan Brady Urological Clinic. The building is to be six stories high and to have accommodations for 40 public and 20 private patients. Dr. Smith also stated that the greatest need of the hospital at the present time is a fund which will enable them to run the Harriet Lane Home for Invalid Children to its full capacity of 100. There are at present accommodations for only 35 children.

Securities comprising the gift by the General Educational Board of $1,500,000 to the Johns Hopkins Medical School, with which to establish the William H. Welch Endowment for Clinical Education and Research, were delivered to the trustees of the University July 6. The Johns Hopkins Medical School is the first medical institution in the country to receive money for research work from the General Education Board. This will place it upon a full-time basis in all departments. A grant of $750,000 has been made to Washington University, St. Louis, and of $500,000 to the Medical School of Yale University, upon the understanding that they also reorganize their work so as to put their clinical teaching upon a full-time basis.

Simultaneously with the completion of the reorganization of the Johns Hopkins Medical School in accordance with this new plan, the University trustees have chosen Dr. Theodore C. Janeway, hitherto professor of medicine at Columbia University, to become professor of medicine of the Johns Hopkins Medical School, the position once held by Sir William Osler.

The chair of surgery at Johns Hopkins, under the full-time arrangement, is to be occupied by Dr. William S. Halsted, most of whose surgical career has been passed in the Johns Hopkins Medical School, where, since the establishment of the Johns Hopkins Hospital, Dr. Halsted has been its surgeon-in-chief and professor of surgery.

The chair of pediatrics will be occupied by Dr. John Howland, who was called a year ago from the professorship of pediatrics at Washington University, St. Louis, and appointed physician in charge of the Harriet Lane Home for Invalid Children, this institution being the pediatric clinic of Johns Hopkins Medical School.

At a meeting held in Philadelphia on Monday, June 22, attended by 800 members of the American College of Surgeons, a campaign was started to raise a half-million-dollar endowment fund for the establishment, in Washington, D. C., of a permanent home for the institution. Dr. J. M. T. Finney of Baltimore, president of the college, announced that subscriptions amounting to more than $100,000 had been received inside of an hour, and he believed that the fund would reach at least $1,000,000. One thousand one hundred fellowships were conferred, bringing the total membership to over three thousand.

Dr. J. Percy Wade, Physicians and Surgeons, '91, superintendent of Spring Grove State Hospital, Catonsville, who has been spending some time with friends in Frederick, has returned to the hospital.

Dr. John Howland, of 20 East Eager street, who has been abroad, has returned to this country and has gone to Blue Ridge Summit, where he has joined his family. They will spend the summer there.

Dr. and Mrs. J. T. Geraghty, of 2108 Mount Royal Terrace, are spending some weeks in New England.

Dr. Lloyd P. Shippen, assistant surgeon, U. S. N., of 209 West Monument street, was the victim of a bold robbery recently, when burglars forced an entrance to his home and escaped with silverware, clothing and other articles valued at $500. The robbery occurred while Dr. Shippen was spending the day out of town with friends.

Dr. Abraham Samuels, Physicians and Surgeons, '98, of 1928 Eutaw Place, left for a trip abroad on July 14. He will return August 27, when he will resume his practice. Dr. Samuels is associate professor of gynecology at the College of Physicians and Surgeons.

Dr. Hugh H. Young has been elected first vice-president of the Alumni Association of the University of Virginia. At a recent meeting of the American Medico-Psychological Association, held in Baltimore, Dr. Young was elected an honorary member of the association.

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AN IMPORTANT CONTRIBUTION TO RADIUM THERAPY.

THE WORK OF THE LONDON RADIUM INSTITUTE IN 1913.

The first report of the London Radium Institute (*British Med. Jour.*, Jan. 25th), 1913, was one of the most important contributions that have been made to the literature of radium therapy, and the second report (A Report of the Work Carried Out at the Radium Institute, London, A. E. Hayward Pinch, Medical Superintendent, *British Med. Jour.*, May 23, 1914; *The Lancet*, May 23, 1914), while much briefer, is no less interesting and encouraging. It is the policy of the Radium Institute not to treat operable cases of malignant diseases save under most exceptional circumstances. In view of this use of radium as a last resort, it is very interesting to find many of the cases described as apparently cured. The permanence of these results can only be decided after a number of years, and then only can those cases which have remained without new manifestations of the disease be called cured. The statement in the report that "little or no effect appears to be exerted in the prevention of metastatic deposits, though the treatment does not, at any rate, hasten their dissemination," is a further reason for awaiting the test of time in judging results. The report deals with the cases which were treated at the Institute during the year 1913, and the following tabulated summary shows all the cases treated, together with the results obtained. The report gives the additional facts that have been noted in the work with regard to the prognosis and treatment of various diseases, and in the following we quote extensively from the report, since the conservative opinions and the authoritative data given cannot fail to be of general interest:

	Examined, but not treated.	Results not yet noted.	Prophylactic treatment only.	Apparently cured.	Cured.	Improved.	Not improved.	Abandoned treatment.	Dead.	Total.
Carcinoma, Squamous-celled:										
Glabrous skin	1	..	1	2	..	4	4	1	..	13
Buccal, oral, lingual and pharyngeal mucous membranes	6	10	6	..	..	9	15	3	4	53
Esophagus	5	..	..	..	..	4	4	1	..	14
Larynx	1	2	..	..	..	1	..	..	..	4
Vagina and vulva	..	..	1	1	..	3	1	1	1	8
Uterus	..	2	2	..	..	27	8	1	2	42
Penis	..	..	..	..	..	..	1	..	..	1
Bladder	..	..	..	3	..	3	..	1	2	9
Carcinoma, Spheroidal-celled:										
Breast	11	22	11	2	..	40	19	11	12	128
Liver and gall-bladder	..	..	..	..	..	1	..	..	..	1
Thyroid	..	..	..	..	..	3	..	..	1	4
Paget's disease	..	..	..	1	..	..	..	..	..	1
Carcinoma, columnar-celled:										
Large intestine	1	4	2	..	..	..	..	1	1	9
Rectum	9	9	1	..	..	23	16	..	6	64
Stomach	..	..	..	..	..	1	1	1	..	3
Ovary	..	2	..	..	..	..	1	..	2	5
Prostate	1	..	..	..	..	4	..	..	..	5
Kidney and suprarenal gland	..	1	..	..	..	..	..	1	..	2
Parotid	..	..	..	..	..	..	1	..	..	1
Rodent Ulcer	4	21	2	40	..	34	7	3	..	111
Sarcomata:										
Spindle-celled	1	..	1	1	..	8	4	1	1	17
Round-celled	1	..	..	..	..	1	..	..	1	3
Melanotic	..	..	1	..	..	..	1	..	..	2
Myelosarcoma	1	..	..	..	..	1	..	..	..	2
Lymphosarcoma	..	1	..	..	..	2	..	..	..	3
Endothelioma	..	2	2	..	..	2	2	1	1	10
Lymphadenoma	..	..	..	..	..	4	2	1	..	7
Malignant glands	1	1	..	..	..	..	2	3	2	13
Parotid tumor	..	..	..	..	..	..	1	..	..	1
Abdominal tumor	..	..	..	..	..	..	1	..	1	2
Mediastinal tumor	..	1	..	..	..	4	..	1	..	6
Villous tumor of bladder	..	..	..	..	..	2	1	..	..	3
Polypi of vagina	..	..	..	..	1	..	..	..	..	1
Adenoma of thyroid	1	2	..	..	..	..	..	..	..	3
Fibromata	3	..	..	..	1	3	2	1	..	10
Fibroid disease of uterus	..	1	..	..	..	6	..	..	..	7
Leucoplakia	2	..	..	1	..	2	..	..	..	5
Nevi:										
Capillary	..	4	..	..	1	19	1	..	..	25
Cavernous	1	1	..	..	2	8	2	..	..	14
Moles, warts and papillomata	1	2	..	..	8	6	1	..	..	18
Tuberculosis:										
Glands	..	..	..	1	..	2	..	..	..	3
Skin	1	..	..	..	..	5	..	..	..	6
Conjunctiva	1	..	..	..	..	..	..	..	..	1
Spring catarrh	..	..	..	1	..	1	..	..	..	2
Chronic inflammations	1	1	..	..	2	3	..	..	..	7
Chronic ulcerations	1	..	..	..	1	6	1	..	..	9
Skin Diseases:										
Keloid and vicious cicatrices	2	2	..	2	..	10	1	..	..	17
Lupus erythematosus	..	..	..	..	..	6	..	..	..	6
Psoriasis	..	1	..	..	..	4	2	..	..	7
Pruritus	..	2	..	..	2	2	2	..	..	8
Chronic eczema	..	..	..	..	..	3	1	..	..	4
Lichenfication of skin	..	..	..	..	..	1	..	..	..	1
Mycosis fungoides	..	..	..	..	..	1	..	..	..	1
Roentgen-ray dermatitis	..	..	..	..	..	..	1	..	..	1
Telangiectasis	..	..	..	..	..	1	..	..	..	1
Hypertrichosis	..	..	..	..	..	..	1	..	..	1
General Diseases:										
Arteriosclerosis	3	1	..	..	..	2	1	1	..	8
Exophthalmic goitre	1	1	..	..	..	4	..	..	..	6
Myelogenous leukemia	..	..	..	..	..	1	..	..	..	1
Myasthenia gravis	..	..	..	..	..	..	1	..	..	1
Neurasthenia	1	..	..	..	..	2	..	3	..	6
Neuritis	6	5	..	..	..	5	3	..	..	19
Gout	..	2	..	..	..	3	..	2	..	7
Neuralgias	..	2	..	1	..	2	1	..	..	6
Rheumatism	3	2	..	..	..	1	..	3	..	9
Arthritis deformans	41	69	..	..	..	47	39	8	..	204
Totals	112	176	30	56	18	341	152	50	37	972

"The results obtained in the treatment of epitheliomata affecting glabrous surfaces call for no fresh comment, and in suitable instances removal of the growth by radium may be confidently anticipated."

"Epitheliomata of the buccal, lingual and pharyngeal mucous membranes still prove both refractory and disappointing in their response to radium, but a new method of treatment has recently been devised which in instances of cancer of the tongue has given distinctly encouraging results. It consists in the burying within the carcinomatous nodule of a very small but intensely powerful radium emanation tube possessing an initial activity equivalent to that of 80 to 100 mgm. of radium bromide enveloped in a screen of 1 mm. of silver or 0.3 mm. of platinum, and giving an exposure of twenty-four hours' duration. A fairly severe reaction follows, and in some cases the nodule ceases to grow and becomes replaced by dense fibrous tissue."

"Several cases of epithelioma of the esophagus have been under treatment, but unfortunately, the majority of these have been in so advanced a stage as to preclude all hope of success. In those instances, however, where complete occlusion had not occurred, and it was possible to introduce radium actually into the lumen of the growth distinct though temporary benefit has resulted, and that this effect is not merely mechanical due to the dilation of the stricture by the apparatus is evidenced by the fact that the improvement in the power of swallowing has persisted for six or even nine months after the termination of the treatment."

"Carcinoma of the uterus still continues to yield most gratifying results, and the effects of radium treatment in inoperable cases are far in advance of those obtained by any other known medical or surgical methods. The local manifestations of the disease are benefited in the most striking fashion, and the complete disappearance of fungating growth, arrest of hemorrhage and discharge, healing of ulceration and relief from pain are phenomena of almost daily occurrence. In favorable cases, moreover, the treatment appears to exert a distinctly retarding influence on the dissemination of metastatic deposits, and thus to arrest the progress of the disease. It is not possible, however, to speak of 'cure' even in these latter instances."

"Great care must be exercised in the treatment of recurrences, which make their appearance within six months of the performance of a Wertheim's operation. The functions of the trophic nerves of the pelvis seem often to be seriously impaired by the extensive and elaborate dissection which is associated with this method of hysterectomy, and for this reason the amount of radium used should be small, not exceeding 50 mgm., the screening not less than 1.5 mm. of lead, and the total exposure not longer than 20 hours spread over four or five days. Unless these precautions be observed, a severe and extensive destructive reaction may follow the application of radium."

"In all cases where radium has been applied within the vagina

the patient should be instructed to douche freely night and morning for at least six weeks after the termination of the treatment, as unless this be done an adhesive vaginitis not infrequently occurs. In some extremely susceptible subjects a transient proctitis has been noted to follow upon intravaginal treatment."

"The screening employed in cases of carcinoma of the uterus is either 1 mm. of silver or 2 mm. of lead, but the thinner screening should only be adopted when the cervical canal is patulous and the tube can be introduced into its cavity."

In cases of carcinoma of the breast it has been found that "many patients exhibit a great susceptibility to radium; the primary growth becomes smaller, infected glands and subcutaneous nodules lessen or perhaps even disappear. Little or no effect appears to be exerted in the prevention of metastatic deposits, though the treatment does not, at any rate, hasten their dissemination. Some cases in which pleurisy, dependent upon carcinomatous invasion of the pleura, has been present have shown remarkable improvement, and the application of powerful apparatus screened with 2 mm. of lead over the affected pleura, after a preliminary paracentesis, has effectually prevented the further formation of pleuritic effusion."

"A few patients have been under treatment at intervals of three or four months since the opening of the Institute in September, 1911, and it has been noted that a stage in their treatment is reached sooner or later at which the response to radium fails, and the benefit derived becomes negligible."

"Small isolated recurrent nodules, inoperable by reason of their attachment to the sternum, clavicle, ribs, or rib cartilages, are best treated by burying a small powerful emanation tube screened with 1 mm. of silver in them for a period of 24 hours."

"Encouraging results have been obtained in the few instances of carcinoma of the thyroid that have come under notice, the progress of the disease has been arrested, and a decrease in the size of the existing growth has been obtained, the general discomfort and dysphagia when present being greatly relieved. The line of treatment employed has been the use of numerous powerful applicators screened with 2 mm. of lead and so disposed over the surface of the growth as to obtain the maximal cross-fire irradiation. Burying of emanation tubes within the growth has not yet been adopted owing to the great tendency of these growths to fungate if any breach be made in the investing skin."

"The superficial lesion in Paget's disease is usually speedily cured by one hour's exposure to a half strength plate unscreened, but the underlying induration and affection of glands, if present, require prolonged treatment with heavily screened applicators if any real benefit is to be obtained; in cases in which the patient is willing to submit to operation this procedure should always be adopted."

"Carcinoma of the rectum displays much variation in its response to radium therapy, and numerous factors have to be con-

sidered in prognosis. Speaking generally, the soft annular and vascular type of growth is much more favorably affected than the flat, hard, non-annular plaque with much subjacent induration. In the treatment of this latter class of growth the action of the gamma rays (which it is impossible to prevent) on the healthy rectal mucous membrane opposite the plaque produces a proctitis, which, though generally transient, sometimes proves both persistent and severe, and adds greatly to the patient's discomfort. In the treatment of the former type, if the radium tube be of proper dimensions and introduced accurately within the lumen of the growth little or no healthy mucous membrane is affected by the gamma rays, and no proctitis occurs."

"Growths situated in the upper half of the rectum appear to be more amenable to treatment than those in the lower, though this may be due to the fact that tenesmus is always more constant and severe when the growth is near the sphincters."

"The performance of a colostomy before radium treatment is often advisable, as the constant passage of feces over a surface that is reacting to radium frequently causes much pain. Idiosyncrasy is sometimes responsible for curious results. Some patients are extremely susceptible to the action of radium, and proctitis appears quickly, is very severe, and persists for a long time. With others the reaction sometimes takes six or eight weeks to develop, proceeds exceedingly slowly, and does not disappear for two or three months."

"The routine method of treatment consists of a 30-hour exposure—five days of six hours each, with a tube containing 100 mgm. of radium bromide, screened with 2 mm. of lead and 3 mm. of rubber, and applied in actual contact with the growth, the series of exposure being repeated at the end of six weeks. If the patient proves extremely susceptible smaller doses are given at shorter intervals. In the most favorable cases the carcinomatous material shrinks and becomes replaced by dense fibrous tissue. In instances where the original growth has been of the annular type a fibrous stricture will result, which will need frequent and regular dilatation."

"The number of cases of carcinoma of the prostate which have been treated up to the present is not very large, but benefit has been noted in all of them. Hematuria, when existent, has been either diminished or abolished, pain has been greatly lessened, and the size of the growth decreased. Various methods of treatment have had to be adopted according to the nature of the case. When catheterization can be well tolerated, a 50 mgm. tube of radium bromide in a 'window' screen of 1 mm. of silver and 1 mm. of lead is introduced per urethram, and maintained in actual contact with the growth for a period of two hours a day on five successive days, and its action is supplemented by another tube of 100 mgm. in a screen of 2 mm. of lead, introduced into the rectum for six hours a day on five successive days."

"When catheterization is not practicable or advisable, the action

of the rectal tube is reinforced by a powerful flat applicator screened with 2 mm. of lead, and placed either on the perineum or over the pubes."

"Nine cases of carcinoma of the bladder have been treated, and in six instances the results have been most gratifying. The hematuria, cystitis, and all subjective symptoms have disappeared, and cystoscopic examination has shown that the size of the growth has been greatly lessened, and any ulcerated surface has become covered with healthy epithelium."

"The treatment has consisted of the introduction of a 50 mgm. tube of radium bromide in a 'window' screen of 1 mm. of silver and 1 mm. of lead inserted per urethram, and maintained by means of a pliable silver wire in such a position that the window side of the apparatus is in actual contact with the growth. If the lesion be on the base of the bladder, a second tube screened with 2 mm. of lead is placed in the vagina in female, and in the rectum in male patients; but if on the anterior bladder wall, a flat applicator similarly screened is fixed over the pubic region. The usual length of exposure is 10 hours intravesically in five days of two hours each, and 30 hours with the vaginal, rectal or pubic applicators spaced over the same number of days."

"But little has been added to our knowledge of the treatment of rodent ulcer, but when dealing with the question of prognosis it appears justifiable to divide rodent ulcers into two definite clinical types:

"1. The hypertrophic nodular type, with slight superficial ulceration of a scaly character. This class responds extremely well to radium, and yields most satisfactory results."

"2. The excavating type, with undermined and overhanging edges and a gelatinous base. This not infrequently proves very intractable, and repair is most difficult to effect."

"Whenever the size and situation of the ulcer permit, it is best to give one powerful unscreened exposure, a full strength plate being applied in actual contact with the ulcer for one, two or three hours, according to circumstances. One such treatment usually suffices to produce an apparent cure. Exposures of short duration repeated at frequent intervals are not nearly so effectual, and instances have been met in which the adoption of this procedure appears to have been responsible for the development of an epithelioma on the site of the original ulcer."

"Rodent ulcers attacking cartilage, bone or mucous membranes are very refractory, though an exception should be made with regard to the orbital mucosa, which is generally very amenable to the action of radium."

"Speaking in general terms, sarcomata, if taken in their early stages, and before dissemination has occurred, do very well under radium treatment. The burying within the growth of tubes of radium salts or radium emanation should be resorted to whenever practicable, and the action of these tubes may be much helped by the external application of radium plates heavily screened."

"It is important to use a large quantity of radium, and to give a heavy dosage. Small doses should be avoided, as they exert a distinctly irritating effect and stimulate the growth of the tumor. The best results are obtained in sarcomata of the tonsil and post-nasal space, and the results in many such cases are amazing, the growths completely disappearing within six weeks of the treatment. Lymphosarcomata also give excellent results. Melanotic sarcomata are not influenced by radium, and in a few cases that have been treated no benefit has been observed."

In lymphadenoma "when the disease is localized and confined to one or more small superficial areas the disappearance of the enlarged glands is frequently brought about by the use of radium, and the progress of the disease is thus arrested."

"When, however, the condition is generalized, the employment of numerous large and powerful applicators becomes necessary, and this heavy dosage is almost always followed by severe systemic disturbance, with high temperature and general malaise. After the reaction has subsided considerable improvement is often apparent, but this is only temporary in character, and the condition sooner or later returns with increased severity."

"In almost every instance of mediastinal tumors that have come under observation the rate of growth has been very markedly checked by the use of radium, and in one or two cases a definite decrease in the size of the tumor, as seen by X-ray screening, has undoubtedly occurred."

"If the condition be accompanied by an accumulation of fluid in the pleura and paracentesis be performed, radium appears to exert a very remarkable action in lessening the tendency of the production of further effusion."

"In these cases the use of a very large quantity of radium (400 to 500 mgm.) is indicated. The applicators should be screened with 2 mm. of lead, and disposed in such fashion over the chest wall as to procure the maximum 'cross-fire' irradiation."

"Treatment must be very persistent, a total exposure of not less than 30 hours should be given, and the series repeated at the end of four weeks. This heavy dosage is almost invariably followed in two or three days by a feeling of great fatigue and exhaustion, but this condition passes off completely in about a week's time."

"In fibroid diseases of the uterus radium exerts a most beneficial action upon the distressing symptoms, menorrhagia and metrorrhagia, which are the almost invariable concomitants of this condition, though it seldom produces any very great diminution in the size of the uterus. As the cervical canal is rarely sufficiently patulous to admit a screened radium tube without previous dilatation, and patients are often averse from this, the treatment may be carried out by the introduction of a tube containing 100 mgm. of radium, screened with 2 mm. of lead, into the posterior fornix, and applying a plate of from 80 to 100 mgm. similarly screened over the fundus uteri."

"The total exposure should be between 30 and 60 hours, spread

over from five to ten days, and the series should be repeated after six or eight weeks. The first effect noted is the checking of the metrorrhagia, and this followed by a progressive decrease of the menorrhagia until the flow becomes normal, or sometimes ceases altogether."

"Leucoplakia patches on the tongue, cheek or vulva are speedily removed by radium, but they tend to recur sooner or later. Half-strength plates screened with 0.1 mm. of lead should be used, and exposures varying from one to three hours' duration, according to the thickness of the lesion, should be given. A slight superficial reaction takes place and the patches disappear."

"Before expressing an opinion as to the possibility of radium treatment effecting an improvement in any particular instance of flat superficial nevi, capillary nevi 'port-wine stains,' etc., it is advisable to subject the lesion to diascopy. If blanching is readily effected by gentle pressure, the result of the treatment will probably be satisfactory; but if it be found impossible to produce blanching except by great pressure, it is unlikely that radium can do much for the condition."

"Infinite patience is necessary in the treatment of superficial nevi, and the utmost caution must be observed. It is best to use quarter or half strength applicators screened with 0.01 mm. of aluminum and to start with short exposures of from 15 to 20 minutes' duration, gradually increasing the length of the same until a satisfactory reaction has been obtained. So soon as the lesion has assumed a salmon-pink color, the screening should be altered to 0.1 or 0.2 mm. of lead, and the length of exposure increased to one, one and a half or two hours."

"Cavernous nevi do excellently under radium, especially when of such shape that 'cross-fire' radiation is possible. Half strength applicators screened with 0.1 mm. of lead should be employed, and the exposure should be from one to three hours' duration, spread over three successive days. Little or no surface reaction is produced by this method of treatment, and the nevus shrinks gradually and steadily. If, on palpation, the presence of a pulsating vessel is appreciable, the case is not likely to prove completely successful unless the vessels be first ligated."

"Warts and papliomata yield readily to short exposures of from twenty minutes to one hour's duration with half strength apparatus unscreened. The reaction is but slight and the resultant scar scarcely noticeable."

"Tuberculosis of Glands.—In cases in which surgical measures have been declined for cosmetic reasons, radium often proves of considerable value, either when used alone or as an adjunct to vaccine treatment. Heavily screened exposures of 30 or more hours' duration should be resorted to and an effort made to secure 'cross-fire' irradiation where practicable. If the glands be caseating, radium treatment is of very little use."

"Lupus Vulgaris.—As a routine treatment for this disease, Finsen light is greatly to be preferred to radium, but where it fails

to effect a cure or improvement, radium sometimes proves of great use. Unscreened exposures of one or two hours' duration must be given and a destructive reaction produced; the resultant scar is usually firm, smooth, supple and inconspicuous."

"In spring catarrh the employment of radium is strongly to be advocated, as it will often cure the most intractable cases. Personal idiosyncrasy is, however, a very important consideration, and it is essential to proceed with great caution, giving short unscreened exposures at intervals of a fortnight, and carefully noting the reaction. If the dosage can be accurately adjusted, the granulations on the orbital conjunctiva gradually disappear, there is no marked inflammation, and no resultant scarring of the mucous membrane. A special form of applicator should be used which can readily be introduced into the conjunctival fornices. It should be of full strength, and the first exposure should not exceed 15 minutes' duration. No screening is employed. If the effect be not satisfactory, the length of the exposure may be increased to 20, 25 or 30 minutes until the desired result is obtained."

"Keloids give most excellent results when treated with radium, and a general improvement, if not complete cure, can be safely predicted. In tender and painful keloids the anesthetic effect of radium is generally very marked, and appears very early in the treatment."

"Screening with 1 mm. of silver is almost always employed, and an exposure of from 18 to 30 hours spread over from three to five days, according to the size and thickness of the lesion, is given. This brings about a gradual absorption of the keloidal tissue, unaccompanied by any surface irritation."

"Lupus Erythematosus.—This very intractable and puzzling disease often responds favorably to radium, even after all routine methods have failed. Short exposures with half or quarter strength apparatus, slightly screened and repeated at intervals of four weeks, give the best results."

"Psoriasis and Chronic Eczema.—Both of these conditions generally yield readily to short unscreened exposures of from two to five minutes' duration, given on three successive days, the series of exposures being repeated at intervals of a fortnight. The patches quickly disappear after a slight superficial reaction, and in eczematous cases there is but little tendency to recurrence. With psoriasis, however, the disease almost invariably reappears after a time, though with some patients the interval that elapses may be of many months' duration."

"Lichenification of the skin, with its attendant intolerable itching, is quickly relieved and often completely cured by one exposure of 10 or 15 minutes' duration to a half-strength applicator screened with 0.01 mm. of aluminum. Some very obstinate cases which have hitherto defied all the usual methods of treatment have responded most favorably to this procedure, the lesions have disappeared and have not recurred."

"Pruritus.—The analgesic effect of radium is often of the great-

est use in this disease, and short unscreened exposures frequently produce a degree of relief which is unattainable by any other measures. This is especially noticeable if the pruritus occur in association with a definite lesion such as leucoplakia or hyperkeratosis. If the dosage be carefully considered and the treatment repeated at fortnightly intervals until the skin is restored to its normal condition complete and permanent cure may result. If, however, the condition be a neurosis, the prognosis is not so hopeful, and the benefit derived, if any, is not likely to be of very long duration."

"Few patients suffering from exophthalmic goitre have as yet been treated at the Institute, but the results obtained are sufficient to justify a trial of radium when other treatments have failed to produce any result. Prolonged exposures of 30 or more hours' duration in all should be given, with heavily screened apparatus containing 200 or 300 mgm. of radium, the apparatus being so disposed as to cover as much as possible of the gland surface."

"Three or four weeks usually elapse before any effect is appreciable, but from that time on a gradual diminution in the size of the gland, with slowing of the heart's action, lessening of tremor and of the degree of proptosis, may be looked for. The series of exposure should be repeated at intervals of three or four months."

"Arthritis Deformans.—The daily administration of 250 c. c. of radium emanation solution of a strength of not less than 1 millicurie per liter to patients suffering from this obstinate and painful and crippling disease is sometimes attended by very remarkable results. It is difficult to predict with certainty the degree of improvement likely to occur in any particular instance but the cases which appear to derive most benefit are those in which the disease is of relatively short duration and the changes are periarticular in type and multiarticular in distribution. The age of the patient also exerts some influence, those under 40 responding more quickly to the action of the emanation. Cases with a definite gouty history sometimes experience an acute exacerbation of all their symptoms within the first week or ten days of their treatment but this disturbance is quite transient and is usually followed by a distinct change for the better.

"Little or no improvement can be looked for in instances where cartilaginous or osseous changes are predominant and the radium emanation solution is powerless to bring about the absorption of osteophytic growths or the loosening of fibrous or bony ankylosis."

"When limitation of movement is due to periarticular fibrous thickening considerable increase of mobility often follows on the taking of the radium water and enables patients to perform actions, such as feeding themselves, brushing their hair, shaving, etc., which they may have been powerless to do for some months, or even years."

"Other favorable effects of the treatment are the lessening or disappearance of the muscular and articular pains, the grating of the joints on movement is not so marked, the muscles regain much of their lost tone, and the patient's general health is much im-

proved. This is especially noticeable when the patients are suffering from anemia, the hemoglobin index being rapidly increased."

"Much research work has yet to be undertaken to enable an accurate opinion to be formed of the manner in which radium emanation solution produces these results, as its action appears to be a multiple and highly complex one, but the reinforcing of the body ferments, the increase of tissue oxidation, and the dissolving uric acid are undoubtedly factors which contribute to its success."

MODERN SURGERY: GENERAL AND OPERATIVE. By John Chalmers DaCosta, M.D., LL.D., Samuel D. Gross Professor of Surgery, Jefferson Medical College, Philadelphia; Surgeon to the Jefferson Medical College Hospital; Surgeon to St. Joseph's Hospital, Philadelphia; Fellow of the American Surgical Association; Member of the American Philosophical Society; Member De La Societe International de Chirurgie; Member of the Medical Reserve Corps, U. S. N., etc. Seventh Edition, Revised, Enlarged and Reset, with 1085 Illustrations, Some of Them in Colors. Philadelphia and London: W. B. Saunders Company. Baltimore: The Medical Standard Book Co. 1914. Cloth, $7.50 net

It gives us great pleasure to announce to our readers that this popular work on surgery is just as complete if not more so than any of its predecessors. It goes thoroughly into the many complexities of both theoretical and practical surgery, and can, as heretofore, be used by student as a supplement to his classroom work. It thoroughly sets forth the surgical doctrines of the day without sophistication, and in that clear lucid manner peculiar to the author. Surgical bacteriology, surgical pathology, surgical treatment, etiology, diagnosis and practices are all gone into sufficiently thoroughly for every day purposes. In the main we are in accord with the writer's views, but here and there of necessity differences creep between us. Still these are personal opinions and both are very likely right. As heretofore the main merit of the book is its compactness of statement, no space being wasted with a prolixity of words, but the author driving home the idea he wishes to convey with the directness of which he is a past master.

A SYNOPSIS OF MEDICAL TREATMENT. By George Cheever Shattuck, Assistant Physician in the Massachusetts General Hospital. Second Edition. Revised and Enlarged. Boston: W. M. Leonard. 1914.

Much in little certainly accurately describes this book. One is informed with the waste of as little energy as possible the treatment employed at the Massachusetts General Hospital in the ordinary medical diseases. To the busy practitioner desiring a brief resume of treatment in the ordinary diseases it should prove an invaluable aid.

CORRECTION OF EXTERNAL NASAL DEFORMITIES BY SUBCUTANEOUS METHOD.

By Lee Cohen, M.D.

THE nose, being the most prominent feature of the face, any striking variation in its size or relative position may so mar the countenance as to make it most unsightly. Persons so deformed are, in fact, so frequently objects of comment and ridicule that they become keenly self-conscious, and a psychical depression is often brought about, amounting in many instances to melancholia. Joseph cites cases of actual attempts at suicide owing to this depressing effect upon the nervous system. Aside from the effect of these deformities upon the mind, the industrial and social side of the question also offers ample reasons for correcting these conditions. For example, one of my patients with a strikingly oversized nose assured me that advancement with the local wholesale house who employed him was greatly hindered by his appearance. Another, violinist in a large orchestra from one of our neighboring cities, realized beyond doubt that a marked deformity of his nose prevented his usefulness as a soloist. In still another instance, a woman came to me with a hideously deformed nose, brought about by the bad management of a fracture sustained by falling down stairs. This otherwise prepossessing young woman was so convinced that the grotesque change in her appearance would militate against her in a social and matrimonial way that her depression amounted to a real disease.

We see, therefore, the fallacy of the generally-prevailing belief that these persons are prompted by vanity alone to seek relief. Then, too, these external deformities are so frequently accompanied by obstructive changes within the nose, such as spurs and deflections of the septum, that the very health of the individual if often impaired through faulty nasal breathing. For this latter reason, in my humble opinion, the correction of all deformities of this type belong rightly and only within the domain of the competent rhinologist, and not to the general surgeon. In other words, no correction of the outward deformity should be made without at the same time giving due attention to the necessary relief of conditions within.

Though the feasibility and advisability of this work has been abundantly proven in the results obtained by Roe, Joseph, Berens and a few others, there has, for some reason, been no very widespread inclination on the part of rhinologists to perfect themselves along these lines. Too often, therefore, have persons seeking relief from these deformities become the prey of unscrupulous, so-called "beauty specialists," who, as a rule, are wholly

incapable of caring for them. The purpose of this short paper is not only to mention the methods which have been employed by me in correcting such cases as have come under my care, but is also a plea for the proper recognition of this work, and to do away with a still existing belief, in cases of congenital deformity, that so long as some sort of nose is present we are not justified with tampering with the works of Providence. Certainly no one questions the need or right of the ophthalmologist to straighten a squinting eye for cosmetic purposes, even though binocular vision may not be restored through the operation.

The deformities here under consideration are divided into two classes: (1) idiopathic or congenital, (2) acquired. To the former belong the oversized or hump nose, the congenital saddle and pug nose, while to the latter belong all sorts of grotesque alterations in the shape and position of the nose caused by fractures and dislocations, and likewise by the destruction of the bony and cartilaginous framework from syphilis, tuberculosis and lupus.

Since injuries to the nose which are not properly corrected primarily cause the greater portion of deformities, I should feel remiss in my duty if I let this opportunity pass to remind my colleagues in general practice that even apparently insignificant fractures and injuries to the noses of young children may be the cause of hideous disfigurement as the nose develops. For this reason all injuries to the nose deserve the most careful consideration and management.

For practical purposes, a further subdivision is generally made into deformities affecting the bony and those affecting the cartilaginous portions of the nose, though a strict separation of the two is not always possible. For instance, in the so-called vertical deformities the bony portion of the nasal dorsum may be actually over-developed or merely appear so because of a depression or lowering of the plane or cartilaginous portion, and conversely, the bony portion may appear under-developed because of an over-development of the cartilages making up the lower part of the nose.

In all surgical operations about the face the prime object is, of course, to avoid mutilation of the skin. An operation might, otherwise, substitute scars quite as hideous as the original deformity. For this reason all operations to improve the symmetry of the nose must be done subcutaneously, as first done by Roe, or in some cases of lateral deformity, the fracture method first described by Berens may be employed to advantage.

It is needless to say that thorough cleanliness must be observed, lest our results be defeated by infection, this consisting of a proper cleansing of the entire face and interior of the nose in the usual surgical manner. In order that the field may not be contaminated from the mouth, a sterile apron of dental rubber dam

is fastened about the lip below the nose, shown here in picture No. 1. This apron also prevents blood from running into the mouth of the patient, who is always in a sitting posture for local anesthesia. When operating under ether, the patient being in a recumbent position, and the ether is given through a tube introduced into the corner of the mouth by means of a vapor apparatus, we cover the mouth with a sheet of sterile gauze, since the rubber would interfere with mouth breathing. Mouth breathing is made necessary under these conditions because a posterior nasal

Figure 1.—Rubber Apron Used by Writer.

tampon is employed to prevent blood from running down the throat of the patient, and unless nasal breathing is held in obeyance during operation under ether, which always augments secretion of mucous from the nose, some of this mucous may find its way into the wound.

In all operations where the subcutaneous method has been employed, I have found local anesthesia sufficient even in subjects so young as 13 years. When following the method of Berens, however, it has seemed best to resort to profound ether anesthesia. For local anesthesia cocaine only has been used by me, and in the following manner: The interior of the nose is cocain-

ized with a 10 per cent. solution, after which a one-quarter of 1 per cent. solution is injected under the skin of the entire nose, the needle being inserted from within the nasal vestibule into the subcutaneous tissue.

In describing further the technique of these operations, I cannot make it more clear than by briefly reporting a few of the cases upon which I have operated.

Case No. 1 (Picture No. 2), Mrs. D.; age, 33.—We see here a sharp, circumscribed hump about the middle of dorsum of nose in consequence of a fracture of both nasal bones sustained while coasting when a young girl. The skin, which was tightly drawn over the sharp edge of the hump, often became inflamed and was exceedingly sensitive. Patient was always in constant dread of sharp edge cutting through the skin in case of an accidental

Figure 2. Case 1.
Before Operation. After Operation.

blow on the nose. Under local anesthesia the skin over nasal dorsum was undermined through an incision made from within the left nasal vestibule at lower end of nasal bone. The hump was then removed with a saw introduced through the incision, and afterwards taken out through the same opening. The surface was smoothed by means of a small file, and the skin then placed back and held smoothly over the nose by means of a copper saddle, illustrated in Plate 3. The nasal vestibules were loosely packed with iodoform tape and the patient sent home. Recovery was uneventful, patient wearing the splint for about 10 days continuously and for two weeks longer at night only.

Case No. 2 (Picture No. 4), H. M.; age, 19 years.—Poorly nourished and anemic young man. Has suffered from nasal obstruction for years. Right nostril almost completely occluded by a markedly deflected septum. Externally, the bony portion

of the nose was bent toward the right, the cartilaginous portion turning toward the left side, giving to the nose a twisted appearance. The nasal obstruction was first removed by a modified submucous resection, which at the same time corrected to a great extent the curving of the cartilaginous portion toward the left. Four weeks later, under ether anesthesia, the bony portion of the nose was placed in the middle line of the face, the fracture method of Berens being employed for this purpose. This, briefly, is as follows: With a strong pair of Adams forceps, one blade of which is placed within the nose, the other, covered with rubber tubing to prevent injury to the skin, is placed on the outside, the nasal bones are grasped, first one then the other. They are in this way forcibly fractured from their attachments to the frontal bone, the nasal processes of the superior maxillary, and from each

Figure 3.—Copper Saddle in Place After Operation.

other in the middle line. To narrow the nose at its base, the nasal processes of the superior maxillary are separated from their attachment to the parent bone with chisel and hammer, and are displaced toward the middle line of the nose. This is, of course, done subcutaneously, the chisel being placed against the bone from the inside of the nose. In some cases the use of the saw seems preferable for this purpose, as done by Roe and Joseph. The perpendicular plate of the ethmoid must also be fractured with the same forceps, one blade being introduced into each nostril, the rubber being here left off. After this is all accomplished, should there still exist a prominent point along the dorsum or side of the nose, this may be reduced by placing a rubber-covered flat instrument against the nose over this protrusion and giving it a sharp tap with a hammer. When the nose is thus

completely mobilized, it is moulded into shape with the thumb and index finger on the outside, using a small elevator on the inside to prevent a depression of the fragments. Both nasal vestibules are now packed with iodoform tape, and a copper saddle, made especially to fit each nose, is applied as in the preceding case.

To properly mobilize a nose so much force is at times required in fracturing the bone that, observing the operation, one might suppose this to be an exceedingly brutal procedure, but in reality the reaction following is trifling and patients complain of very little after-pain or discomfort.

Three weeks later the cartilaginous portion of this patient's nose appeared too broad. This was corrected by removing subcutaneously a narrow elliptical strip from each wing of the nose. These strips included the mucous membrane and cartilage to the

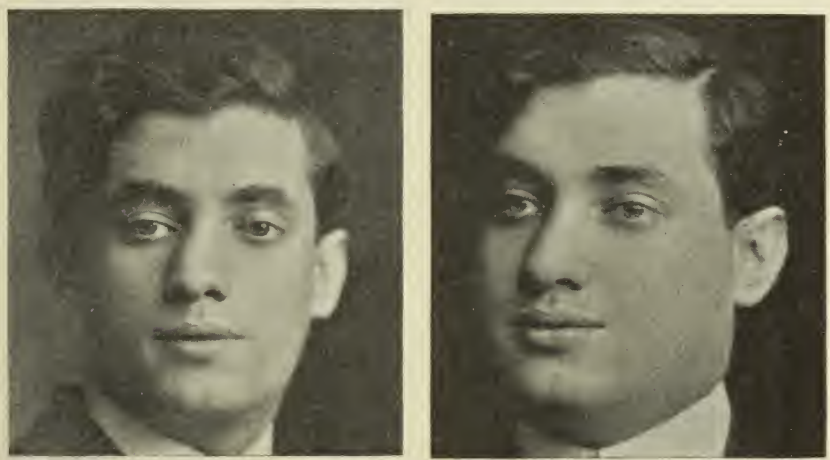

Figure 4. Case 2.

Before Operation. After Operation.

skin, and extended from near the edge of the anterior nasal orifices upward, parallel to and about one-quarter inch from the septum nasi. When the edges of these incisions were brought together with three silk sutures, the width of the cartilaginous portion was correspondingly reduced.

Six months elapsed after the final correction of this nose before the second picture was made. During this time, owing to the relief given by restored nasal breathing, the patient has taken on 20 pounds in weight and hardly looks like the same fellow.

Case No. 3 (Picture No. 5), Girl; Age, 13.—Complaint, difficult nasal breathing, due to a deflected septum and hypertrophied lower turbinates, along with a marked lateral deformity of the nose externally. Her parents were more concerned, however, about the outward deformity than the obstruction to her breath-

ing. On July 15, 1913, an attempt was made under ether anesthesia to correct the deviated septum and the external deformity at the same time. Berens recommends this in all deformities of this type. Result, as far as the outside deformity was concerned, was most satisfactory. The septal deflection, though apparently overcome at the time of operation, showed in a few weeks almost as great a bend as before correction. About six weeks later, therefore, under cocaine, a modified submucous was performed, both lower turbinates being resected at the same time. Three days later a paracentesis was necessary, owing to an abscess in the left ear, which cleared up in a short time.

In a total of 26 cases, this is the only one in which an ear complication has been observed. I have concluded from this case, as well as from similar experiences in others so operated

Figure 5. Case 3.
Before Operation. After Operation.

upon, that it is always best to first rid the patient of internal obstruction before attempting a correction of the external deformity.

Picture showing results was taken three months after correction of external deformity.

Case No. 4 (Figure 6, front view; Picture 14, profile); H. H.; Boy; Age, 13 Years.—Complained of obstructed nasal breathing due to deflection of nasal septum toward the left. In addition, a lateral deformity of the bony portion to the left, with a large hump on the dorsum nasi and a very prominent cartilaginous portion of the nose following injury six years before, gave to this child a very unprepossessing appearance. On June 29, 1913, a modified submucous resection was performed under cocaine.

Figure 6. Case 4.—Front View.
Before Operation. After Operation.

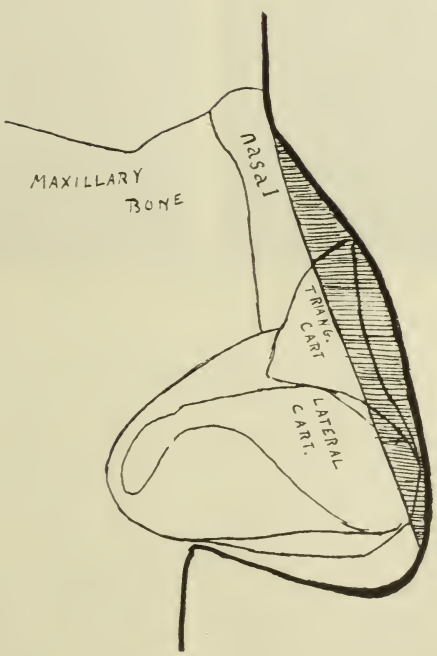

Figure 7.—(Schematic) Dark Portion Indicating Amount of Dorsum Nasi Removed in Lowering Plane. (Joseph.)

July 23, 1913, under ether anesthesia, lateral deformity corrected and nose placed in middle line of face, leaving the hump for correction by a subsequent operation. September 29, 1913, under cocaine, the bony hump was removed subcutaneously with saw and file, and the plane of the cartilaginous portion lowered with the knife, giving the result as shown in the pictures taken six weeks after the last operation. (Figure 7).

Since these photographs were taken there has been a still further improvement in the appearance of the nose, swelling having entirely subsided.

Case No. 5 (Picture No. 2); C. R.; Male; Age, 19.—Considerably oversized nose, still further deformed by having been struck on its left side by the end of a piece of falling timber two

Figure 8. Case 4.—Profile of Nose.
Before Operation. After Operation.

years before. When first seen patient showed a long adherent scar extending from the inner canthus of the eye, up the left side of the nose, beyond the middle line of the dorsum. This can be plainly seen on the picture. In addition, the lower edge of the left nasal bone had been driven inward, resulting in a marked depression below it. The upper edge was turned outward, standing as a sharp edge under the skin near the dorsum, which appeared very broad and flat. The cartilaginous portion stood out very prominently, and the tip was unusually large. September 22, 1913, under local anesthesia, after the skin over the entire nose was undermined through the usual incision from within, the sharp ledge on the left side of the nose was sawed off subcutaneously and turned down to fill in the depression below it. The attachment of the nasal processes to the superior maxillary

were sawed through and the nasal bones completely mobilized, so that by compressing them the base of the nose was narrowed. (Figure 9.) At the same time a 4 m. m. strip of cartilage and mucous membrane were removed from the inside of the cartilaginous portion of the nose, near the septum on each side. These strips included portions of the lower lateral cartilages and tapered to a point about ½ c. m. above these, so that the entire cartilaginous portion was narrowed and the bulging tip reduced when edges of the wound within the vestibule of the nose were drawn together with silk sutures. After packing the nose the cop-

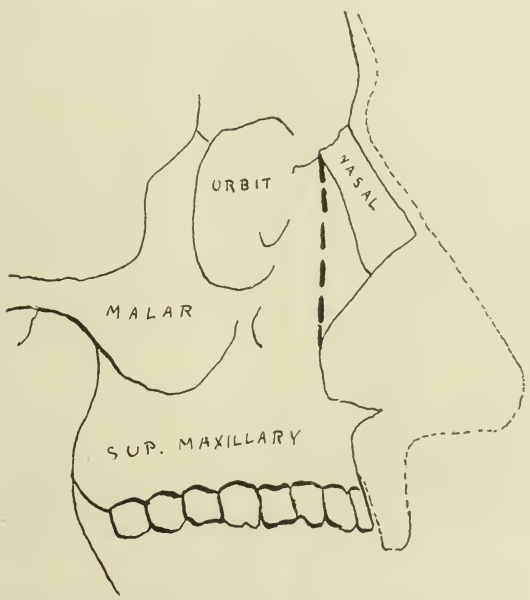

Figure 9.—(Schematic) Dark Line Indicating Direction of Saw in Severing Nasal Process to Narrow Base. (Joseph.)

per saddle was applied in the usual manner. Saddle was worn continuously for about a month, when patient returned to his home in West Virginia with instructions to wear same for three or four weeks longer. Picture showing result was taken the day that he left for his home.

In this case not only was the bony deformity in consequence of the fracture corrected, but the entire nose reduced in size, and the conspicuous scar could hardly be seen at all after being detached from the bone to which it was adherent.

Book Reviews.

Die Heilwirkung des Radiums, nach einem Vortrage, gehalten vor der Roentgen-Society in London, von Dr. Siegm. Saubermann, Berlin-Vienna. To be had by applying to Radium Limited, U. S. A., 25 W. 45th street, New York City.

This pamphlet, consisting of 40 pages, with 36 illustrations, is the latest publication on the subject of Radium Emanation Therapy. It is of the greatest importance and interest to the physician desirous of using the Radium Emanation in treating those diseases which it influences, on account of its thorough, but still concise, discussion.

The 36 illustrations contained are, in all probability, the first of their kind ever shown in this country, and demonstrate clearly the effects of the rays and emanation of radium.

Treatment of Chronic Leg Ulcers. A Practical Guide to Its Symptomatology, Diagnosis and Treatment. By Edward Adams, M.D., Instructor in Surgery, New York Post Graduate Medical School and Hospital; Attending Surgeon to the German Hospital, O. P. D.; Fellow of New York Academy of Medicine; Fellow of American Medical Association, etc. Cloth, $1 net. New York: International Journal of Surgery. 1914.

Owing to the frequency of leg ulcer of one kind or another the modern methods employed for its cure should be at the thumb's end of every general practitioner. This little book of some one hundred pages goes thoroughly into the diagnosis, symptomatology and treatment of the several ulcers as found in the leg. It is brief, concise and an excellent exposition of the subject.

International Clinics. Edited by Henry W. Cattell, A.M., M.D., Philadelphia. Volume 1. Twenty-fourth Series. 1914. Philadelphia and London: J. B. Lippincott Company. Cloth, $2 net.

Volume 1 of the Twenty-fourth Series of International Clinics is replete with interesting, useful and helpful articles. No matter where one opens the book, one is sure to find something practical and valuable in one's practice. Amongst the most important articles may be mentioned The Treatment of Nephritis, by Robert N. Wilson; Cardiovascular-Renal Regulation by Other Means Than Drugs, by J. Madison Taylor; The Importance of Frequent and Thorough Medical Examination of All Citizens, by Victor C. Vaughan, and The Prophylactic Treatment of Rheumatism, by N. S. Davis.

In his essay on Drugless Cardiovascular-Renal Regulation, Davis says: "Treatment of cardiovascular disorders, to effect

cure, should be initiated so early in stages of evolution as to amount practically to prevention. Since there are no characteristic early symptoms, reliance must be placed on rational forms of living and prompt recognition of dangers in neglecting evidences of certain functional disturbance. Hence the key to best results lies in making clear the perils of faulty personal conduct, and also the importance of expert guidance and control throughout life. Until mankind becomes aware of the deep significance and economic value of medical supervision when in health, and of prompt consultation when even slightly out of health, this conservation cannot be effected.

"When blood pressure is found to be abnormally high, we are confronted with either temporary or acute disturbances which demand prompt precautionary and remedial measures. When this phenomenon appears in persons otherwise vigorous, especially toward or after middle life, it may, and usually does, indicate structural changes in the blood vessels pointing to advanced disease."

Among the measures he recommends for these disorders are education in mind control, respiratory education, regulated movements, mechanical stimulation by pressure, skin friction, colonic irrigations, hydrotherapy, blood-letting and regulation of diet. In advising venesection the author states: "Bear in mind that a weak radial pulse is no contraindication, rather the one plain signal to relieve the overburdened heart."

However, each article contains something which should appeal to the general practitioner.

Immunity. Methods of Diagnosis and Therapy and Their Practical Application. By Julius Citron, Assistant at the University Clinic of Berlin, II Medical Division. Translated from the German and Edited by A. L. Garbat, M.D., Assistant Pathologist and Adjunct Visiting Physician, German Hospital, New York. Second Edition. Revisied and Enlarged. Thirty Illustrations. Two Colored Plates and Eight Charts. Philadelphia: P. Blakiston's Son & Co. 1914. Cloth, $3.50 net.

The immunity question has come to play such an important role in medicine that any information which may throw additional light on the subject is of great value to the medical profession. As Dr. Citron has devoted considerable thought and work upon every phase of immunity and its practical application to the treatment of disease, his conclusions are indeed a welcome addition to medical literature. At one time the study of immunity was of only academic interest, but today its application in many ills makes it a live question with all practitioners of medicine, be they internists or surgeons. It is with both the theoretical as well as the practical aspect of immunity that the above book deals. Here in succinct form one is quickly made acquainted with the last word in immunity. Our predictions are that it will be accorded a most favorable reception.

Maryland Medical Journal

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BALTIMORE, SEPTEMBER, 1914

PROPHYLAXIS OF MENTAL DISORDERS.

There is no gainsaying the actual as well as relative increase of mental diseases in the United States. Indeed, the increase has become so marked that it is high time that the several States employ measures to control the menace. Perhaps mental maladies cannot be stamped out entirely; still, the causes of much of the insanity are well enough recognized to give the State authorities a tangible basis upon which to start the campaign of eradication. Amongst the factors playing an important part in the propagation of insanity and mental unbalancing are alcohol, syphilis and habit-producing drugs. Any one and all of these agents play no small part in the causation of mental instability. In other lines of medical effort it is a well-recognized fact that prevention rather than cure is the order of the day. So here prevention must be looked to to lessen the alarming increase in psychiatric ills rather than cure. The community should be protected by the State from this unnecessary loss of human efficiency. The healthy have a right to expect this protection, just as much so as protection from an invasion by an armed enemy. Therefore, the medical profession should arise as one man and demand that the State do something toward controlling this ever-increasing menace. A start has already been made along these lines by the alienists and neurologists of the United States, who, at their third annual meeting held in Chicago, July 13 to 17, 1914, adopted the following resolutions:

Whereas, It is well recognized by alienists and neurologists the world over that certain major factors are the chief causes of physical conditions accompanied by mental derangement and deficiency; and

Whereas, These major causes are largely, if not wholly, controllable and eradicable; and

WHEREAS, These major causes are alcoholism, habit-producing drugs, venereal diseases, work in unsanitary and unhygienic surroundings and hereditary influence, including the immigration of the physical and mental unfit; therefore, be it

Resolved, First: That we recommend to the proper State authorities the absolute control of the sale of alcohol until such time as actual prohibition be enacted.

Second: That the sale of all habit-inducing drugs be strictly regulated in all States of the Union.

Third: That municipal or State control of venereal diseases be established, with proper treatment for indigent patients, to the end that the spread of syphilis and gonorrhea be prevented.

Fourth: That proper special hospitals for the care and treatment of alcoholism and drug addictions be established.

Fifth: That municipal, State and National inspection of labor conditions be regularly maintained and child labor abolished.

Sixth: That no known defective dangerous to himself and to others should be permitted to have unrestricted liberty.

Seventh: That adequate teaching of the principles of heredity and sex life be initiated and fostered in the home, with the view to its introduction into the curricula of schools, above the grammar grades this instruction to be given to the sexes separately.

Eighth: That the various States pass reasonable and universal marriage laws that will be reciprocal in preventing the marriage of the physical and mental unfit.

Ninth: That a psychopathic laboratory be connected with the criminal courts and common schools, railroads, transportation companies and public service utilities, responsible for the actual safety of the general public should have their employes regularly examined as to their physical and mental fitness.

Tenth: That, inasmuch as State, county and city public health institutions should have as their superintendents men of highest qualifications who may devote their best efforts to their tasks, we recommend that all such positions be subject to civil service examinations.

Eleventh: That in addition to the above we recommend a nation-wide campaign of education conducted through the public press, university and medical schools, boards of health, State, county and city boards of education, women's clubs and other proper educational mediums upon the true significance of the development—physical, mental and moral—of the individuals and the race, and, finally, we recommend that a committee be appointed to promote the enactment of the above resolutions.

These protocols are reasonable, and both the profession as well as the laity are entirely justified in the demands that the State do something to lessen the increase of insanity. The people have just as much right to expect the promulgation of laws protecting their mental stability as the enactment of laws looking to the prevention of bodily ills.

REPORT OF BOARD OF MEDICAL EXAMINERS OF MARYLAND.

QUESTIONS AT THE JUNE (1914) EXAMINATIONS.

OBSTETRICS.

1. What degree of pelvic contraction is compatible with delivery.
2. How do you measure the conjugate diameters?
3. How should uterine inertia be treated?
4. What is the treatment of placenta previa when occurring before the full term?
5. What are the dangers in a breech presentation?
6. When should the forceps be applied and what preliminaries are necessary in their application?
7. What alternatives do we possess to the use of the forceps?
8. Describe the ligaments of the uterus.
9. Describe the operation of transfusion.
10. Give the treatment of caruncle.

SURGERY.

1. Give the differential diagnosis between acute catarrhal conjunctivitis and gonorrheal ophthalmia, and the general principles of management of each.
2. Name the varieties of goitre and mention the indications for surgical interference.
3. Describe the fractures commonly designated as: (a) Colles' facture. (b) Pott's fracture. Give treatment of each.
4. Give the differential diagnosis between a fracture of surgical neck of humerus and a dislocation of the shoulder joint.
5. Give diagnosis and treatment of epithelioma of the lower lip.
6. Name the varieties of tumor of the bladder, with symptoms of each.
7. Give the differential diagnosis between appendicitis, cholelithiasis and ulcer of the pylorus.
8. Give the symptoms, diagnosis and treatment of tuberculous disease of the hip joint.
9. Name the varieties of fistula-in-ano and give the treatment for same.
10. Give symptoms and treatment of acute osteomyelitis.

PRACTICE.

1. Define: (a) Epistaxis, hemoptysis, hematemesis. (b) Anuria, polyuria, hematuria. (c) Pellagra. (d) Pertussis. (e) Litten's sign. Romberg's sign.
2. Define: (a) Koplik's sign. Kernig's sign. (b) Anterior poliomyelitis. (c) Percussion, ausculation, vocal fremitus, succussion. (d) Emphysema. (e) Urticaria.
3. Differentiate: Rubeola, scarlatina and rubella.
4. What diseases are most commonly found in the right iliac region?
5. Name the various types of organic valvular heart disease.
6. Give fully the differential diagnosis between cholelithiasis and nephro-lithiasis.
7. Name the various diseases in which dysphagia occurs.
8. Give treatment of scarlet fever and its complications.
9. Give treatment of ulcerative stomatitis.
10. Give treatment of typhoid fever and its principal complications.

PATHOLOGY.

1. How would you estimate the number of bacteria present in a given amount of liquid, for instance, in 1 c. c. of milk?
2. Tenia solium. Describe it and give its life history.
3. Describe the changes occurring in and following fibrinous or plastic pleurisy.
4. How is typhoid fever transmitted? How in general is it prevented? On what does its specific prevention depend?
5. Describe the precipitin reaction. Of what medico-legal importance is it.
6. What is a thrombus? An embolus?
7. Describe the changes occurring in untreated gonorrheal ophthalmia.
8. Describe an "adenoid." When may adenoid tissue be considered pathological?
9. How are specimens for microscopic examination made by the freezing method.
10. What is an abscess? Describe the processes of its production.

PHYSIOLOGY.

1. Name the forces concerned in the circulation of the blood, and describe how each acts.
2. Define protoplasm, and give properties of living protoplasm.
3. Describe the effects of starvation on the various body tissues.
4. (a) Give functions of the medulla oblongata. (b) Give functions of the cerebellum. (c) Give functions of the spinal cord.
5. Describe the functions of the skin, mucous membranes and serous membranes.
6. Describe the formation and functions of lymph and the properties and functions of bile.

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PRESIDENTIAL ADDRESS.

REMARKS ON THE PRINCIPLES OF MEDICAL ETHICS.

By Randolph Winslow, M.D., LL.D.,

President of the Medical and Chirurgical Faculty of Maryland.

To aspire to the presidency of such an ancient and distinguished association as the Medical and Chirurgical Faculty of Maryland is a laudable ambition; to expect the realization of this ambition is an audacious conceit. I acknowledge that I have entertained this ambition, but have not had the assurance to expect its attainment. Placed, therefore, by your favor in this chair, which has been filled by so many learned and distinguished men, I beg to extend my profound thanks for this high honor that you have conferred upon me.

The Medical and Chirurgical Faculty of Maryland was founded in 1799 for the purpose of "promoting and disseminating medical and chirurgical knowledge throughout the State," and of "alleviating the calamities and miseries of their fellow-citizens." One hundred and one of the most prominent physicians of the State were the incorporators of this important and far-reaching enterprise. While some of the medical practitioners at that time were men of high culture and of excellent qualifications, others were ignorant quacks, without training or skill, who preyed upon a helpless public. It was for the purpose of combating this evil that this Faculty was founded. It was made the authority by which the right to practise was acquired, and for 39 years it exercised this right through its two boards of examiners, one for the Western and one for the Eastern Shore. In 1838 the Legislature annulled this provision, illegally, and for 54 years this Faculty exercised only a moral supervision over the practitioners of the State. In 1892, however, by an act of the Assembly, the licensure to practise was again vested in this Faculty through a special board of medical examiners.

It rests, therefore, with this body to determine who shall practise medicine in this State, though, unfortunately, it does not possess the power to cancel the license of those who may prove un-

worthy of the trust that has been placed in their hands. While this Faculty cannot deprive anyone of the right to practise after he has been licensed by the examining board, it has the right through its component societies to determine the conditions on which persons may be received into membership, and may continue to hold membership, in both this Faculty and in the American Medical Association. For over a century the Medical and Chirurgical Faculty of Maryland has been a most important factor in promoting and disseminating medical and chirurgical knowledge throughout the State, and in calling into being numerous agencies for alleviating the calamities and miseries of its fellow-citizens. It has, in addition, endeavored to protect the citizens of the State from ignorant and rapacious practitioners, as well as from charlatans who are dishonest even if not ignorant. It has also striven to inculcate high principles of ethical conduct between the members of the profession in their relations with one another and with the public. There was perhaps no State in the Union in which there was a more punctilious professional etiquette than in Maryland; and we look with admiration akin to veneration upon those worthies of an earlier day, with their dignity, urbanity and stately courtesy—qualities that are so frequently lacking at the present time.

In a primitive condition of civilization the elemental forces prevail, but as society becomes more complex it becomes necessary to have rules and laws to govern the conduct of its members, to restrain the vicious and to protect the weak and helpless. In similar manner it has been found necessary to prescribe certain principles of conduct, formerly called the "code of ethics," to regulate the relations of physicians to each other and to the public. These principles of medical ethics have been formulated by the American Medical Association, of which we are an integral part, and are consequently binding upon us; though it seems to be impossible for the laity, and especially for the public press, to understand why every physician should not do as he pleases, notwithstanding that every other branch of organized society has its own rules and regulations to which its members are required to subscribe. The underlying principle of the code of ethics is the command of Christ, "Do unto others as you would have them do unto you," which we also find expressed in a personal manner by Confucius: "What I do not wish to have done unto me, I likewise wish not to do unto others." If everyone lived up to these principles of conduct there would be but little necessity for the formulation of any code of ethics, but, unfortunately, human nature is weak, and it is necessary that physicians associated together should understand clearly certain broad rules of conduct by means of which the dignity, honor and usefulness of the profession is maintained. Medicine is not a trade, it is a profession; and one that is advanced well-nigh to a science. The methods of the tradesman, hawking his wares, are not reputable for the honorable practitioner of medicine, and are forbidden. One of the greatest efforts of this Fac-

ulty has been to maintain a high degree of professional honor and to prohibit the commercialization of the profession. Through its board of medical examiners the public is measurably protected from incompetent practitioners, though much is still to be desired in this direction. Every year, however, progress is being made in the preparation of medical students, and a great advance in both scientific and practical medicine (if, indeed, the terms are not synonymous) is constantly going on. What shall we say in regard to the moral tone of the profession? Has it also advanced to a higher plane? We must answer with shamefacedness, No! The opening statement in the Principles of Medical Ethics of the A. M. A. is: "A profession has for its prime object the service it can render humanity; reward or financial gain should be a subordinate consideration. In choosing this profession an individual assumes an obligation to conduct himself in accord with its ideals." As has been stated, we are bound to abide by and uphold the principles of ethics adopted and promulgated by the A. M. A. I therefore beg to call attention to some subjects upon which especial emphasis is laid in the declaration of the principles of ethics of that body. One of the cardinal principles of ethics of an earlier day was that it was improper for the physician to reveal the nature of a patient's ailment, especially if it was of such a characater as to bring shame or embarrassment to the sufferer or to his family. Now it is of frequent occurrence to see in the daily papers that Mr. or Mrs. Blank is being treated for cancer or for some other serious condition. To thus advertise broadcast the infirmities of our patients is both indelicate and improper, and should not be tolerated. Again, we frequently see in the daily papers that prominent citizens living at a distance are coming to Baltimore for treatment. How can such matters get into the papers? I hardly suppose the patients announce their plans or their ailments to the reporters, yet full particulars are conspicuously heralded to the public. This notice is also highly improper and unprofessional, and should not be allowed. It is a covert advertisement which is both in bad taste and reprehensible, and is specifically condemned in the code of ethics, which says: "It is unprofessional to procure patients by indirection through solicitors or agents of any kind, or by indirect advertisement, or by furnishing or inspiring newspaper or magazine comments concerning cases in which the physician has been or is concerned. All other like self-laudations defy the traditions and lower the tone of any profession, and so are intolerable." Notwithstanding this sweeping condemnation, the names of members of this Faculty and of the American Medical Association appear *ad nauseam* in the daily papers in relation to wonderful cures that are expected to be wrought, and which usually are not wrought. It is impossible that the names of physicians should not be mentioned occasionally in connection with important or unusual cases, or where distinguished or prominent patients are concerned, but this should occur but seldom, and such public notice should be issued by the family, and not by the doctor. Not only

does the A. M. A. prohibit this direct or indirect advertising, but the newly-organized American College of Surgeons, of which some of us are fellows, requires as a prerequisite to fellowship the signing of a solemn pledge, one paragraph of which reads as follows: "Moreover, I pledge myself, so far as I am able, to avoid the sins of selfishness, to shun unwarranted publicity, dishonest money-seeking and commercialism as disgraceful to our profession." Can anything be stronger than this reprobation by both the A. M. A. and the College of Surgeons? How can one who is guilty of such practices become or remain a fellow of either body? It is also reprehensible to publish or to permit to be published accounts of wonderful operations, which, according to the reporter, are amongst the rarest and most delicate in surgery, such as resection of a portion of a rib for the evacuation of pus from the thorax or the grafting of skin upon a raw surface. Equally to be condemned is the ascription of remarkable therapeutic or diagnostic discoveries to certain individuals, when the actual discovery was made, probably, before such persons were born. When by chance such statements issue from the fertile brain of a reporter and find their way into the public press, they should be promptly disclaimed. The papers are filled with such notices, and they usually pass unchallenged. It is undoubtedly true that the public is entitled to be informed of those matters in which they are vitally interested, even when it upsets their previous ideas and prejudices. Thus, even in a matter as thoroughly demonstrated as the efficiency of vaccination against smallpox, there is still either the greatest carelessness or the densest and most culpable ignorance; and it is necessary that the public should be warned from time to time of the disastrous results of the neglect of this simple and almost harmless expedient. They should also be informed of the means by which typhoid fever is spread and the prophylactic measures for its prevention. The relation of flies, mosquitoes and other insects to the propagation of certain infections and zymotic diseases is also a matter of public interest; and the eradication of these pests is of the greatest public utility. All these and many other matters of public health may well be discussed, and even forced upon the attention of the people. The curability of tuberculosis, when taken in its incipiency and treated judiciously, is also something that should be known to everyone. This Faculty has for years waged a campaign of public instruction in regard to these matters, and has not only taught the public concerning their dangers, but has succeeded in having the State erect sanitaria and hospitals for the treatment of cases of tuberculosis, insanity and other widespread ailments. At the present time a crusade against cancer is being waged all over the country. It is a most important subject, and of vital interest to all the people. It is an absolutely proper subject for discussion in public meetings, but great care is necessary to make the discussion impersonal, and not a means of personal advertisement. In my opinion, it would be best to leave the crusade against cancer in the hands of physicians rather than

of surgeons; but if it is conducted by surgeons, personal statistics of cures should not be given, nor does it appear to me to be ethical to give magic-lantern demonstrations of pathological conditions to a mixed audience. It savors too strongly of personal exploitation.

Fellows of the American College of Surgeons are required to pledge themselves to make their fee commensurate with the services rendered and with the patient's rights, and to avoid discrediting their associates by taking unwarranted compensation. I think it is but seldom that a physician or surgeon receives greater compensation than he is entitled to. How often, alas, does he receive less than he is entitled to, or nothing at all! Still there is danger that charges disproportionate to the services may be made, or that the services may be exaggerated in order to justify a larger fee. In making charges for professional services, one should carefully consider the ability of the patient to pay, as well as the injurious effect of unusual and exhorbitant fees upon the family physician or other medical associate in the case. Fee splitting or the giving of commissions to agents or solicitors has never been largely practised in our State, and I only desire to call attention to the fact that it is absolutely prohibited by both the A. M. A. and the College of Surgeons.

In the relations of physicians with each other many points of difference are bound to arise; hence the necessity for some general rules to govern the action of practitioners in such circumstances. It is considered unethical for one physician to visit the patient of another professionally in his absence and without his knowledge, except in an emergency. If the family or patient desires to make a change in their medical attendant, the first physician should be formally dismissed before the second one assumes charge of the case. This rule has been frequently disregarded in recent years, and its breach has been the cause of many bitter complaints and animosities between members of the profession. Let us be more careful in the future to observe this precept. A consultant should meet his appointment promptly, but if for any reason either the attending physician or the consultant is delayed, the latter should not examine the patient of the former unless in the presence of an emergency, or unless it will not be convenient to make another visit. In such cases an examination may be made, but the result of the examination should not be made known to the patient, but should be communicated in writing to the attending physician. A consultant should not take charge of the patient of the physician with whom he is in consultation during the same illness, unless with the consent of the attending physician. Indeed, it will be better for the consultant to avoid all appearance of evil by refusing to attend the same case in subsequent sicknesses, unless the patient has in the meantime employed some other physician than the one first mentioned. When patients are referred to specialists to be treated for ailments requiring special knowledge and skill, they should be returned to their regular at-

tendant when the special services are finished. Much complaint has been made in regard to the failure of certain specialists to observe this rule. Also when cases are referred to specialists for an opinion, they should be returned to the physician referring them, and not directed to some other person. We know of numerous cases that have been referred to eminent authorities for opinions, who have either been kept by the eminent persons themselves or have been referred to other physicians or specialists, and have not been returned to the original attendants. This is manifestly improper, and is the cause of much complaint and bitter feeling.

A physician who has been called to see the patient of another practitioner in an emergency, or during the absence of the regular attendant, should not assume charge of the case, but should relinquish it upon the arrival of the family physician. If for any reason he does succeed another in attendance on a case, he should be especially careful not to make unfavorable criticism of the former attendant, or by indirect insinuation or inuendoes to cast reflections on his predecessor. Such criticisms or reflections are often eagerly seized upon by evil disposed persons, or by persons who have not secured the benefits that were expected from treatment, to bring lawsuits against their former attendants. It is reprehensible for physicians to encourage litigation against their fellows, and it may be safely said that very few lawsuits would be instituted and still fewer prosecuted if the family physician discouraged the suit and refused to testify in favor of the patient, except under compulsion. While there may be exceptions to most rules, it is my personal opinion that physicians should decline to testify against their fellow-practitioners as experts, or in any other manner, except as compelled to do so by law. Unfortunately, lawsuits against medical men are of frequent occurrence, causing them much anxiety and distress, and putting them to financial stress and loss. These suits are encouraged, if not instigated, by the family doctor in many cases, and are supported by the testimony of physicians who are as ignorant as they are venal. It should be considered a breach of professional ethics for a physician to aid in bringing a suit against a colleague, or to testify against his fellow except under legal compulsion.

I have touched briefly on a few points of professional conduct that appear to me to demand criticism and reprehension at the present time. I should willingly have yielded this task to others, but, temporarily, I seem to be set as a watchman, whose duty it is to sound the alarm upon the approach of danger; and faithful to that duty, I now declare that we are confronted with the danger of the commercialization of the medical profession, and I enter my solemn protest against this iniquity. This is a commercial age, and there is the tendency on the part of some to judge professional success largely by the ability of a medical man to blow his own trumpet and to secure the attention of the public and the press by commercial methods. It is against this commercialism that the medical profession of Maryland hitherto has stood, and

still stands, as a stone wall; but a minority have emulated the example of the tradesman, and even of the quack, and have brought discredit upon a noble and altruistic calling.

Who are these ethical malefactors who break with impunity every rule of the professional decalogue? Are they insignificant and obscure members of the profession who are compelled to adopt these devices in order to secure means of subsistence? On the contrary, they are, generally, men of commanding ability and of great attainments, occupying high positions in the professional world, into whose laps Dame Fortune has poured her choicest gifts. They are not ignorant of the rules of medical ethics, but they have wilfully disregarded them. They have set a most iniquitous example to the younger and less prominent members of the profession, who perforce must follow in their footsteps. It is useless to attempt to maintain a high standard of ethics and to require the small man to observe this standard while he sees the big man disregard it. The more eminent the violator of the principles of ethics the more culpable is he, and the greater the damage that is done. We cannot hold a double standard; we must be consistent. We must have no respect of persons, but must maintain a high standard for small and great alike, or let down the bars for all. But are we willing to lower the standard of ethics in this State, and to sell the noble heritage that has come down to us from our ancestors? God forbid! Let us the rather return to the faith of our fathers and resolve that, let others do as they may, the medical profession of Maryland will cling to the best traditions of the past, as well as look forward with hope and altruism to the golden future.

THE CLINICS OF JOHN B. MURPHY, M.D., AT MERCY HOSPITAL, CHICAGO. February, 1914. Published Bi-Monthly by W. B. Saunders Company, Philadelphia and London. Baltimore: The Medical Standard Book Co. Per year, $8. Vol. III, No. I.

As its predecessors, the February number of Murphy's Clinics expostulates for the larger part upon bone surgery. It is to this line of surgery that Dr. Murphy is at present devoting a large part of his energy. As a matter of fact, it is he who has placed bone surgery upon its present basis. Therefore, any matter concerning the same directly from the pen of Dr. Murphy cannot help but be welcomed by the surgical fraternity of the United States. From the foregoing we do not wish to convey the impression that this number contains nothing else save bone surgery, for such is not the case. As a matter of fact, there are articles on such divergent topics as Lord Lister and Antiseptic Surgery, Nitrous Oxide Anesthesia, Gastric Ulcer and Carcinoma, Metastatic Infections, Removal of Enlarged and Dilated Stump of Gall-Bladder, Radical Operation for Carcinoma of the Breast, with Description of Dr. Murphy's Special Technic, etc. This number should prove as welcome to the profession as any of its predecessors. No progressive surgeon can be without its bi-monthly appearance.

THE CURABILITY OF CANCER.*

By Joseph H. Branham, M.D.

THIS is the most important surgical question facing the profession at the present time; all other diseases have yielded, at least partly, to the great improvements and discoveries of modern medicine and surgery. Cancer, however, has gone on steadily increasing in all parts of the civilized world, until the most reliable statistics indicate that it is twice as prevalent now as it was fifty years ago. In the meantime, thousands of investigators everywhere have been striving to unravel the cause and discover some means to prevent this scourge, so far without result. The agents we have for combating malignant diseases all arrive at the desired result by destroying the involved tissue and eliminating the malignant cells from the surrounding parts.

That cancer, primarily, is a local disease is the opinion of all scientific men of the present time; therefore, if the neoplasm can be entirely eradicated before its dissemination throughout the deeper parts of the body, a permanent cure will be effected.

That this disease is frequently developed from chronic lesions of the skin and mucous membrane is undoubtedly true. These consist of hyperphasia and chronic irritation associated with loss or impairment of the epithelial covering. Among the most common are warts or moles on the skin, fissures, lacerations and ulcers on the mucous membranes. The careful eradication of these lesions has done much toward the prevention of cancer. Cancer of the stomach usually develops from a chronic lesion of this kind, especially ulceration. This form of cancer seems to be increasing very rapidly, according to Mayo. It is much more frequent in men than in women, and many suggestions have been made explaining these facts. It would seem to me that the excessive use of alcohol, especially in the concentrated and highly irritant forms, is probably one of the etiological factors.

At the present time the only means that we possess for increasing the number of cures in this disease is early and complete operation. Other methods, such as radium and the X-ray, may be used after operation, or in inoperable cases with some possible hope of ameliorating the symptoms, but no one, I believe, would suggest substituting these methods for extirpation in the ordinary cases of malignant growth. An early interference is to be promoted in two ways—the most important of these is the development in our profession of an enthusiastic and positive sentiment toward this end. The laity always follows the profession in these matters, and, in my opinion, we must depend on ourselves to disseminate the proper knowledge to these patients, impressing the terrible danger of procrastination when symptoms of malignant diseases appear. It is the hopeless attitude that has been taken

*Read at the annual meeting of the Medical and Chirurgical Faculty of Maryland, April 30, 1914.

by physicians in the past, and, to a less degree, at the present time, that has caused so much delay among patients in seeking surgical relief.

I am inclined to believe, in spite of the unfavorable comments from Germany, that proper publicity in the general press is of some advantage, and that it can be made still more useful by proper co-ordination between the papers, the magazines and the profession. Meetings like the one held in this hall a few weeks ago will do much good. This method, while accomplishing favorable results, is capable of doing much harm. Neurasthenics, reading the descriptions of malignant diseases, immediately develop all the symptoms of cancer and go to the surgeon for operation; probably, in many instances, not taking the opinion of one surgeon, but go to another seeking some one to remove an imaginary cancerous growth. The tendency of the press to publish exaggerated statements as to new and unproved methods of treatment has, undoubtedly, prevented many patients from having an early radical operation done. By giving a supplementary report of some cases of long standing, I hope to add something toward promoting a more hopeful view of this disease:

Mr. J. R., aged 20, operated on October 12, 1899, for malignant tumor of the pylorous associated with aberrant pancreas. I heard from this man about a year ago, when he was still in excellent health. The sections in this case were reviewed by Dr. William H. Welch.

Mrs. D. was in my office last week looking the picture of health. In October, 1897, I did a hystorectomy on her for cancer of the body of the uterus.

Mrs. W., aged 57, operated February 26, 1895, for cancer of the rectum and vagina. In this case the lower three and one-half inches of the rectum, together with the perineum and posterior wall of the vagina, were removed. A number of the post-peritoneal glands were also excised. She died about one year ago of old age with no recurrences.

Miss J., operated January, 1892, for cancer of the right breast. During the past month she has gone through an attack of pneumonia and is now in good health.

Mr. G., operated November, 1907, for a large cancer of the stomach engrafted on an old ulcer. This patient is a prominent business man of our city. He has suffered from nervous indigestion at times, but is energetic and successful. I have recently examined him and found him entirely free from any indication of recurrence.

These are a few cases from my operations. I give them because of their long standing and permanent cures. All the specimens were examined by competent pathologists and the diagnosis in each case is positive. My results have been about the average. Most cases come too late; others show intense malignancy and die from quick recurrence, and many have been lost sight of.

One thing we must recognize is that, if our results are to improve greatly in internal cancer, the operations must be exploratory in character.

The diagnosis in the first case of cancer of the stomach reported was made by Dr. C. Urban Smith, and was positive. This was possible because the growth was annular and was just at the pylorus. If we wait for a positive diagnosis in most gastric cases, operation is useless. On the other hand, many cases may be saved if the exploration is made in the early stages.

Dr. William J. Mayo has reported numbers of cases of cancer of the gall bladder removed during cholecystectomy for other causes with permanent success, but no successful case operated after diagnosis was made.

Careful removal of all growth with a wide margin of healthy tissue, together with the neighboring lymphatic vessel and glands, is essential. Rough handling, such as curettement of a cancerous uterus or the removal of a section for microscopic examination, often causes rapid dissemination and should always be followed by immediate operation. Grafting on the incision or on other parts of a serous membrane must be carefully avoided.

The rapid improvement in the operative treatment of cancer is gratifying. I think it is undoubted that about half of these cases are being permanently cured at this time. My experience indicates that a much larger percentage will get well if we can secure our cases early. The ones that come back are those whose operation has been delayed until too late. Each of us must impress the vital importance of early diagnosis and treatment on all our patients.

In conclusion, I wish to emphasize the necessity of removing pre-cancerous conditions; of complete and early operations; of exploration of the body cavities for diagnostic purposes in the early stages of cancer symptoms, and of extirpation of all deep-seated growths when suspicious.

LOCAL ANESTHESIA. By Dr. Arthur Shlesinger (Berlin). Translated by F. S. Arnold, B.A., M.B., B.Ch. (Oxon). Illustrated. New York: Rebman Company. Cloth, $1.50 net. 1914.

Local anesthesia is bound to come more and more into favor, therefore any work from the pen of an authority speeds the day. The subject-matter embodies a historical survey, physical principles, local anesthetics, cocaine and its substitutes, adjuvants in local anesthesia, methods of local anesthesia and their application, general technic, etc. As an aid to a better understanding of the modus operandi and sphere of usefulness of local anesthesia this little book should be found very useful. It thoroughly goes into what you can and cannot expect of local anesthesia. It is well illustrated and practical.

THE VALUE AND LIMITATIONS OF FLUOROSCOPIC EXAMINATIONS OF THE GASTRO-INTESTINAL TRACT.

By Thomas R. Brown, M.D.

In discussing the value and the limitations of fluoroscopic examinations of the digestive tract, based on upwards of 1500 cases, it would seem wiser, first, to call attention to the methods employed; second, to enumerate briefly the conditions in which this method of diagnosis is of especial value, and third, to mention the conclusions which we seem justified in drawing.

Our methods are as follows: The patient is given one ounce of subcarbonate of bismuth 18 hours before the examination, urged to avoid a bowel movement if possible, and then given another ounce thoroughly stirred up in a glass of water either just before or synchronous with the examination. In the latter case we believe that a fairly thick gruel of farina or oatmeal is preferable to water, and also an emulsion made up of mucilage of acacia, but for practical purposes the water-bismuth mixture has proven very satisfactory, and it is obviously much more convenient.

The patient is examined in the upright position, as a rule, while if there is any question as to adhesions, atony, ptosis, or dilatation, which cannot be determined in this position, he is also examined in the prone position, or even with the hips somewhat elevated, the comparison of the images obtained being of the greatest value in the diagnosis of difficult cases, especially those of suspected adhesions, of functional hour-glass stomach, and of suspected ulcer.

The stomach and intestine are examined at rest, and during deep inspirations and expirations, and the effect of deep massage given by the operator is carefully noted.

In all esophageal cases the swallowing of the bismuth is carefully noted, the patient's position being a slight rotation forward of the right side, as by this means the esophagus can be more easily made out, while in suspected esophageal obstruction it is wise to try thick as well as thin bismuth emulsions as well as thick bismuth gruel in the hope of determining something as to the nature and degree of the obstruction. Obviously in all such cases careful fluoroscopic examination of the thorax should be made to determine the presence or absence of aneurysm, neoplasm, mediastinal adenitis, etc.

In all cases where the lower bowel seems to be specially involved, such as high grades of kinking and other obstructive phenomena, congenital or acquired dilatation of the colon, etc., we have studied the patient during the administration of a bismuth emulsion enema of one or two quarts, and certainly no other method is so valuable in diagnosing disturbances in this portion of the digestive tract. A normal resistance to the inflow is noted at the various flexures, but if there or elsewhere great increase of

pressure (determined by raising the vessel containing the bismuth emulsion) is necessary before the emulsion flows past that point, it speaks for some form of obstruction—usually pathological.

We have made it a point in all cases of importance or in doubtful cases to repeat the examination at least once, as one should recognize that various outside influences, notably emotional disturbances and the condition of the psyche, can markedly modify the picture presented, especially affecting the motor functions of the digestive tract.

In cases of motor disturbance it is also well to study the patient at varying intervals after the first examination to see how rapidly the stomach empties itself; for practical purposes examination six hours later is all that is necessary, for, according to Schlesinger, the hypertonic stomach empties itself in from two to three hours, the orthotonic in from three to five, the hypotonic in from four to six, and thus the finding of some bismuth in the stomach six hours or more after its administration speaks for atony, dilatation, or pyloric obstruction—although, of course, here again the examination must be repeated to eliminate the possible influence of psychic disturbances.

We must remember that the classical views of the anatomists are wrong as to the normal position of the stomach, this viscus, especially with the patient in the upright position, being much lower than that described in the textbooks of anatomy, often reaching the iliac crests. In the prone position the stomach and large intestine often rise from two to six inches, and the absence of this ascension is suggestive of adhesions. The studies of Hertz and others have definitely shown how frequently low stomachs are to be met with in perfectly healthy students with no digestive signs or symptoms whatsoever.

As to the relative value of the fluoroscope and the X-ray photograph in the diagnosis of digestive diseases, we feel that each has its advantages. The former is much cheaper and much less time-consuming, and is thus peculiarly suitable for the polyclinic. By it we can study the motor function especially well, we can see the effect of the respiratory movements, of abdominal massage, and of change of posture. By using the diaphragm we may study with great care and over considerable time local abnormalities, defects in filling, vacant areas, dislocated and distorted portions of stomach and duodenum, etc., while it is indispensable in studying esophageal lesions, and in studying obstructive signs in the lower bowel during the administration of the bismuth enema. On the other hand, the radiograph is practically invaluable in extremely fat patients; it unquestionably can give us the finer details of the picture more distinctly, it is safer, and it furnishes a permanent record of the condition met with.

In our opinion, a combination of the two methods furnishes the best results, each acting as a check upon the other, and together increasing very materially the percentage of correct diagnoses in a field in which from these methods alone diagnosis is so difficult

because interpretation is of so much more importance than the mere image presented. Were it not for the great expenditure of time and money involved by it, Cole's method of serial radiography would be the ideal procedure, and in cases of great importance or great difficulty it should certainly be employed whenever possible.

In the case of the *œsophagus* we should not forget that organic obstruction may be simulated by spasm, neurotic, hysterical or reflex in origin, the last notably in cases of duodenal ulcer with obstruction, or in cases of very marked gastroptosis—a correct diagnosis only being possible after repeated examinations, studying the level of the spasm to see if it varies, determining the effect of atropine upon it, and in certain cases even making an œsophagoscopic examination. While inspection and palpation may render possible the diagnosis of the pulsion-diverticulum of the neck, we must depend on the X-ray in determining the traction-diverticulum of the lower levels of the œsophagus.

In the case of the stomach we must remember that with a wide costal angle the situation of the viscus is normally much higher than with a narrow costal angle; that normally different shapes may be met with—the cowhorn, the fishhook, the textbook, and possibly the water trap; that we must wait a few moments before studying the motor function, as the introduction of bismuth inhibits for a moment the motility, although, according to Best and others, the movements of the stomach are slowed during the entire cycle by this salt; practically, however, this cannot have a very great effect.

In the diagnosis of gastric carcinoma a persistent defect in the shadow should arouse suspicion, and yet this may be absolutely simulated by adhesions, by a spastic hour-glass stomach, or by high grades of ptosis with atony. In this connection it may be well to call attention to the fact that we are not studying the gastric mucosa itself, but the bismuth contents of the stomach, the distribution of which may be most irregular.

In connection with various forms of spastic contraction of the stomach, especially the hour-glass stomach, with its larger upper and smaller lower portion, as a rule, one must not forget that while sometimes the level of the contraction corresponds to an ulcer, an erosion or a scar, nevertheless more often the hour-glass contraction is either reflex in origin, originating in duodenal ulcer, chronic appendicitis, or disease of the gall-bladder, or is the expression of a general disturbance of innervation, such as various neuroses, Graves' disease, etc. Why in this group of cases the spasm should almost always assume the same level is difficult to understand. Perhaps most careful microscopical studies might show some lesion of circular muscle, or of ganglia, or nerves at the level involved. In these spastic cases one should always try the effect of hypodermics of atropine to determine the nature of the contraction. It is well also to remember that certain of these cases may be overlooked because the spasm is so marked that a consid-

erable time elapses before any bismuth reaches the lower portion of the stomach.

Adhesions involving the pylorus, and originating in duodenum, gall-bladder or hepatic flexure of colon may often be diagnosed by persistent abnormality of position, irregularity of outline, or sawed-off appearance, while in ptosis the fluoroscope will tell the degree of displacement, the effect of posture, of massage, of respiration upon it, and will demonstrate the fact, denied by a great many clinicians, but unquestionably true, that in many of these cases a properly-made bandage or corset, with or without a pad or bolster, will, if properly applied, hold up the stomach very definitely; in fact, the efficiency of every support should be tested by a fluoroscopic examination as, if improperly made or imperfectly applied, it may dislocate still further the ptosed organ. In our experience the support is of peculiar value in those cases of gastroptosis with congenitally or pathologically fixed duodenum, as in this group the upright position is bound to produce traction on the pylorus and difficulty of emptying. In all cases of marked ptosis, suspected dilatation, or pyloric obstruction, the stomach should be examined fluoroscopically six hours afterwards to determine the presence or absence of any bismuth residue.

By far the greatest discussion and the most work in the field has been done in connection with the X-ray diagnosis of gastric and duodenal ulcer, hyperperistalsis being the rule in both of these, associated with pyloro-spasm or spastic hour-glass stomach in the case of the former, and in the latter hypermotility, paradoxical hypermotility, with some retention or marked retention, according to the degree of duodenal obstruction, organic or due to spasm, and to the extent of dislocation of the duodenum. But we must not forget that just as in depressive states, such as myxedema, delayed motility or sluggish peristalsis may be found, so in the reverse conditions of hyperexcitability, such as various neuroses, Grave's disease, etc., we may meet with marked peristalsis or hypermotility involving both stomach and intestines—quite as marked as that in ulcer. In the second place, various organic conditions may produce gastric hypermotility, or hyperperistalsis, or both, such as achylia gastric, carcinoma of the body of the stomach, patent pylorus due to adhesions, new growth, etc., chronic appendicitis, duodenitis or duodenal adhesions, and in some cases of gall-bladder disease, and it may be most difficult, if not impossible, to differentiate the conditions from the X-ray picture alone. On the other hand, it must not be forgotten that a superficial erosion of the gastric or duodenal mucosa, absolutely undiagnosable by the surgeon by examination of the peritoneal surface, may produce exactly the same X-ray phenomena as a deep ulcer easily recognized by the surgeon on exploring the abdomen, and in the presence of other signs and symptoms of ulcer this possibility should always be kept in mind. A resumé of the work along these lines by the best-known American authorities is to be found

in *Surgery, Gynecology and Obstetrics,* March, 1914, the conclusions of which are as follows:

1. In the hands of a competent and experienced observer the Röntgen method may be of considerable service in the diagnosis of gastric and duodenal ulcer.

2. The majority of observers obtain their data by the combined use of the fluoroscopical screen and the radiograph.

3. There is as yet a sufficiently wide divergence of opinion concerning the diagnostic value of certain signs as to make the reader cautious in accepting the present views as final.

4. There is more perfect agreement on the radiographical signs due to the mechanical deformities from callous ulcers and their sequelae than on signs due to the irritation of florid ulcers or the irritable scars of ulcer.

5. The lesions accounting for a spasmodic indrawing of the greater curvature are becoming more numerous. Is there an underlying etiological factor which will explain all cases?

6. In the study of the duodenum there have developed two schools of workers; one, the followers of the European writers, which takes cognizance of all demonstrable changes in motility, and configuration, due to duodenal ulcers and their sequelae; second, those headed by Cole, who believe that all post-pyloric ulcers produce such an effect upon the duodenal walls as to make persistent changes in the configuration of the duodenal shadow. This is to be recognized by a study of a considerable series of radiographs.

7. While it is generally admitted that the radiology of the duodenum is incomplete, it would appear from the above citations that the percentage of accurate inferences regarding duodenal ulcer was greater when the method of serial radiography was used.

In the small intestine, motility, as a rule, is so great that any loop standing out clear-cut is suggestive of a distal obstruction—due to neoplasm, adhesions, ulcer, or spasm—while the dilatation or stasis of the terminal portion of the ileum is very suggestive of some cecal obstruction, and is often associated with a Lane's band. In Grave's disease and various neuroses hypermotility may be so marked that bismuth may appear in the cecum within one or two hours after its administration by mouth.

In the large intestine sluggish motility is, of course, the rule, and marked hypermotility always suggests either a local cause of irritation, such as dysentery or colitis, or a general cause, such as hyperthyroidism. By change of posture, by massage, by repeated examinations of the large inestine we try to determine the presence of adhesions, abnormal position, fixation, obstruction, etc., and yet it may be quite impossible to differentiate, for example, carcinoma, adhesions, or spasm as, notably, met with in mucous colitis, as the cause of the obstruction.

In the case of the rectum and sigmoid the fluoroscopic study of the inflow of the bismuth enema furnishes us unquestionably with

our best means of diagnosing size, shape, position and abnormalities in this portion of the digestive tract.

It will thus be seen that fluoroscopy has aided very greatly in the diagnosis of digestive disease—in the esophagus in determining various forms of obstruction; in the stomach in showing changes in size, shape, and position, in studying the motor function, in noting abnormalities in contour, in the diagnosis of ulcer, neoplasm and pyloric obtsruction, in testing the efficacy of various forms of treatment; in the intestine, in noting evidences of adhesions, of neoplasm, of abnormalities in position and form, of increased or delayed motility.

The plasticity of the method, the ability by its means to study the dynamics, as it were, of the gastro-intestinal tract, to unfold before us its physiology as well as its anatomy, the possibility of noting under our eyes the effect of the respiratory movements, of change of position, of various forms of treatment, mechanical, medicinal and otherswise—all these have made it an invaluable diagnostic aid in the field.

But that it should supplant the other means of arriving at a correct diagnosis is absolutely unwarranted—the taking of a careful history, the making of a thorough physical examination, the study of gastric contents and stool, the use of sigmoidoscope and esophogoscope, each of these furnishes information of real value in the special case without which a proper diagnosis is in most cases impossible.

To expect one method to solve a problem of great difficulty is fundamentally wrong—very few fluorscopic findings are absolutely diagnostic, individual interpretation of the picture presented varies definitely with the operator as almost if not absolutely similar pictures may be presented by different conditions.

Thus fluoroscopy should not be the only court; indeed, should not even be the court of last resort; but should simply be considered one of the many diagnostic methods to be employed in unraveling the case presented—by giving none of these methods an undue importance, by correlating the findings of all the methods employed, by giving each its proper place—then, and then only, will our diagnosis in this most difficult of fields reach the maximum degree of efficiency.

E. Merck's Annual Report. 1913. Vol. XXVI. New York, 45 Park Place.

E. Merck's Annual Report for 1913 is devoted to the recent advances in pharmaceutical chemistry and therapeutics. The first article is a most instructive discussion on lecithin. The volume is also supplemented by an article by Prof. R. Heinz on the "Standardization of Digitalis Preparations." As the edition is limited, those desirous of same can obtain by enclosing the forwarding price of fifteen cents, in stamps, no charge being made for the volume itself.

REPORT OF A CASE OF TUBERCULOSIS OF THE EYE.

By E. A. Knorr, M.D.,
Surgeon at Presbyterian Eye, Ear and Throat Hospital.
and
H. J. Maldeis, M.D.,
Pathologist to the University Hospital and Presbyterian Hospital.

A. F. White, male, 32 years old, Italian, admitted to the dispensary February 16, 1914, suffering from an iritis of the right eye of two weeks' duration of a rather violent type. Vision of this eye was reduced to light perception; that of the left eye was 20/15.

The cornea of the right eye was cloudy, owing to a fine deposit upon its posterior surface. The aqueous humor was also cloudy. These conditions obscured the view of the iris somewhat, but it could be seen that the relief of the iris was effaced and that the crypts were filled with a plastic exudate which extended over the anterior surface. The exudate was more abundant in the upper part of the iris, where it formed a mass which protruded into the aqueous humor.

The pupillary margin of the iris was completely adherent to the lens. The pupil was occluded by an inflammatory exudate, which prevented an inspection of the interior of the eye. During the course of the disease the lens receded, drawing the pupillary margin of the iris with it, so that the anterior surface of the iris presented a concavity resembling the shape of a buttercup.

February 24, 1914—Subcutaneous injection of old tuberculin, 1-1000 mg. No reaction.

February 26, 1914—Injection repeated; slight general reaction; temperature 100⅗; the local reaction was more pronounced; the pain of the eye increased. March 7, 1914, 1-2500 mg. injected. Shortly after this we lost sight of the patient until April 6, 1914, when he returned to the hospital, weak and emaciated, the eye presenting a perforation in the sclera in the vertical meridian, immediately above the cornea. The eye was enucleated upon this date. It was necessary to sew the margins of the perforation together to prevent the expulsion of the contents of the eye.

PATHOLOGICAL REPORT.

Gross appearance—Eye shrunken, a caseous mass in the upper meridian, just behind the limbus, which showed a perforation which extended into the ciliary processes.

On section, the anterior chamber was found to be partly filled with a fibrinous exudate. The vitreous contained a bloody fibrinous exudate. Microscopical examination: A disseminated miliary tuberculosis apparently beginning in the ciliary processes or the iris.

The lens could not be found.

The choroid showed miliary tubercles scattered through this membrane, some undergoing caseation, others in the stage of proliferation, together showing a conglomerate mass containing many giant cells. In some of the patches necrosis and beginning necrosis is evident with disappearance of pigment, except in small scattered areas.

The retina showed involvement of a proliferative type.

Tuberculosis of the eye presents itself, clinically, in three groups of cases:

1. Miliary tuberculosis.

2. Recurrent hemorrhages of the retina and vitreous followed by proliferation in the retina.

3. Toxic tuberculosis.

The case just cited is an illustration of the first group of cases, which do not differ from miliary tuberculosis found elsewhere in the body. Tuberculosis has involved every part of the eye and its appendages. The uveal tract is most frequently involved. The primary focus is usually in the uveal tract, from which it spreads by continuity and contiguity of tissue.

Primary tuberculosis of the retina has frequently been reported. In the case reported by Komoto (Kl. Monat. Bl. F. Augenh., 1911) the retina was crowded with tubercles from the ora serrata to the papilla, whilst the uveal tract, although infiltrated with cells, was free from tubercles.

This may be explained by the fact that the retina was separated from the choroid by a serous exudate.

Cases of solitary or conglobate tubercle of the papilla have been reported by Sullivan and O'Story, Komoto and Jacobs.

Second group of cases. Recurrent hemorrhages of the retina and vitreous followed by proliferation in the retina.

There is nothing unusual about the hemorrhages that occur in the vitreous and anterior chamber in cases of well-defined tuberculosis of the eye; they belong to the hemorrhages of inflammatory origin; but there occur hemorrhages which do not awaken a suspicion of their relation to tuberculosis; they are of spontaneous origin, without prodromal symptoms, and occur in persons under 30 years of age, and their etiology was obscure until Kipp pointed out their association with tuberculosis in a case reported in the Archives of Ophthalmol. in 1909.

Briefly summarized, the history of his case shows that a tubercular individual had had an inflammation of his eyes while six years of age. The scars present in the cornea make it probable that he had had an attack of phlyctenular keratitis. In his seventeenth year he had a tuberculous disease of his hip-joint, with absorption of most of the head and neck of the femur.

In his eighteenth year he had a paresis of the right external rectus muscle, which passed away in the course of a year.

In his twentieth year the left eye was struck by a piece of wood,

causing an iridodialysis at the temporal side and probably a circumscribed chorioretinitis, the scar of which was still visible.

A year later the vitreous of this eye was so full of floating opacities that the fundus could not be seen.

In his twenty-first year he had numerous hemorrhages in the retina and vitreous of the right eye, which had not sustained an injury. This was followed by a retinitis proliferans, which destroyed the sight of this eye.

In the left eye the hemorrhages of the retina and vitreous were also followed by retinitis proliferans and by many more attacks of hemorrhage in the retina and vitreous during the following two years.

In his twenty-fourth year the ophthalmo-tuberculin test, one-half per cent. tuberculin, produced a well-marked reaction.

In his twenty-fifth year he is in excellent health; the right eye is blind; vision of left eye 6/8.

Kipp reported a similar case in the trans. of the Amer. Ophthal. Soc. 1895, in a boy 10 years old, who showed no sign of tuberculosis, but his father was tubercular.

Kipp states that he has seen a number of cases, in young persons in perfect health, without the least sign of tuberculosis, of hemorrhage in the retina and vitreous at intervals of one to six years.

He has also seen retinitis proliferans follow extravasations of blood in the retina and vitreous in both young and old in whom no sign of tuberculosis could be discovered.

This condition was made the subject of a paper, reported by Axenfeld and Stock before the Belgian Ophthal. Soc. 1910, in which they report several cases similar to those of Kipp. The source of the hemorrhage is from the retinal vessels, while this seems opposed to the experimental results of Stock, who, by injecting virulent tubercle bacilli in the veins of dogs, regularly, obtained a tubercular uveitis.

Group 3. Toxic Tuberculosis. Under this title are included nodular exudates in the iris, exudates in the peri-vascular lymphatic sheaths, phlyctenular disease and many other inflammations of the eye. Butler, Ophthalmoscope 1910, lays particular stress upon choroiditis at the macula in children.

The cases of this group are not caused by the presence of the tubercle bacilli in the tissues of the eye, but by the tuberculo-toxines circulating in the blood, generated in foci elsewhere in the body.

The diagnosis is made by the use of tuberculin, and with certainty only when a local reaction in the eye follows the injection of tuberculin subcutaneously.

The lesions are characterized by an evanescent course, and that they disappear usually without leaving any indication of their former existence.

Toxic tuberculosis differs from the miliary form so markedly, both in its clinical course and pathological anatomy, and many of

the cases reported not being well supported, either clinically or pathologically, their tubercular origin still remains to be verified.

That some of the authors reporting cases of toxic tuberculosis were not justified in classing them as tubercular is illustrated by the article of Butler and that of Hayashi.

Butler treated a large number of cases of eye disease with tuberculin; some of the cases gave a positive reaction; those not tested bore such a striking resemblance to those which so tested gave a positive reaction that he was compelled to regard them all as examples of obsolescent tubercle.

Hayashi's Case:

Woman, 42 years old. Two sisters died of T. B. Herself always well.

1894—Iritis of right eye.

1895—Iritis of left eye; later, iridectomized on account of elevation of tension.

1900—Second attack of iritis of right eye.

1901—Third attack of iritis of right eye.

1905—Iridectomy of right eye.

1905—Third attack of iritis of left eye. Nodes in the iris.

Patient examined by an internist. No signs of T. B.

Was given a treatment of tuberculin, 28 injections in two months. During this time temperature arose six times.

Three months later recurrence of iritis on each side. Again treated with tuberculin, seven injections. Nodes appeared in the iris and later disappeared.

1908—Admitted to hospital with spinal cord disease. Examination again failed to show signs of T. B. Died same year with pneumonia.

Post-mortem examination failed to show tuberculosis. Microscopical examination of the eye failed to show tuberculosis.

Hayashi stated that while one would have to be satisfied with a probable diagnosis, the case was no doubt tuberculosis.

The cases included in group two, which present strands of retinal proliferation, have not, as yet, received anatomical proof of their tubercular nature. The same is true of those cases of toxic tuberculosis of group three.

Book Reviews.

COLLECTED PAPERS BY THE STAFF OF ST. MARY'S HOSPITAL, MAYO CLINIC, ROCHESTER, MINNESOTA, 1913. Philadelphia and London: W. B. Saunders Company. Baltimore: The Medical Standard Book Co. Cloth, $5.50 net. 1914.

In the entire book there is hardly a paper which is not of especial interest to the surgeon. The Mayo Clinic is a practical clinic, therefore the papers issued by the staff partake of the same character, and indeed the profession is fortunate to have them collected into a single volume. Internists can also read the papers

with profit. In writing of diphtheria bacillus carriers Sanford states: Five cases have been treated recently in Rochester, Minn. (reported by Dr. H. B. Wood of the Health Department of this city), all of them giving negative cultures after a few days spraying with cultures of bacillus acidi lactici. This organism grows slowly on a solid medium, but after forty-eight hours there is usually sufficient growth on agar-agar slants to make a good suspension. The organisms are washed off with sterile normal salt solution and the cloudy fluid placed at once in a sterile atomizer. The living organisms are then sprayed in the pharynx and nasopharynx every four hours We have not tried the method in enough cases to give us any statistical evidence However, the results in these few instances seem to warrant further trial, and it is with the thought that others may find the method efficacious that we are making this report. Bacillus acidi lactici is a harmless organism, and if it will crowd out bacillus diphtheria in the throat, it would seem to be a better organism to employ in the treatment of diphtheria than staphylococcus pyogenes. Another paper of interest to the interne is "Observations on Peptic Ulcer," by Christopher Graham, who maintains the clinical history is still the greatest factor in the differentiation of lesions causing gastric disturbance Further he states: In discussing the diagnostic features of duodenal and gastric ulcers we should consider, first, the periodicy of the attacks; second, the chronic course; third, the significant symptoms that appear during the period of attack, and fourth, the more or less ready control of symptoms, *e. g.*, pain. He states dogmatically: If attacks of indigestion occur which are not quite clear cut; if during the attack there is some lack of regularity of symptoms; if the pain be somewhat continuous; if remissions, even, are not marked; if, together with the gastric symptoms of distress, gas, bloating, sour regurgitations, or vomiting, continuing for a few days to longer periods; and if each day the symptoms quite nearly repeat those of the day before; if some relation to food be observed; if the symptoms come on one-half to one hour or more after meals; if alkali or irrigation gives relief—if these conditions prevail we may safely exclude from the diagnosis everything but peptic ulcer. The Roentgen ray helps in many perplexing cases and promises even greater aid in the near future.

However, the greatest benefit to be derived from a diagnosis does not come from exact localization of the ulcer, but rather from the diagnosis of a lesion, and determining the patient's needs as to treatment in the light of the available symptoms. We are all agreed with the statement, "Clinical observation goes to prove that the more advanced the obstruction at the pyloric end of the stomach, other things being equal, the better is the result following gastro-jejunostomy, and, conversely, it is equally true that those cases with slight or no obstruction are to some degree less benefited by the operation. In the latter instance this result has been explained on the theory that the pylorus remains open and a portion of the food, with its irritating, though perhaps normal

acids, continues to pass by way of the natural channel coming in contact with the ulcer as before, thus giving a lessened opportunity for the ulcer to heal. This condition of free passage of gastric content by the natural route has been repeatedly verified by post-operative screen and Roentgen plate study, yet many patients whose stomachs are thus functionating are, nevertheless, without symptoms. Such is an example of the articles contained in the present volume. It is needless to quote from others, as the content material is every whit as instructive. We heartily commend the volume to our readers.

STATE BOARD QUESTIONS AND ANSWERS. By R. Max Goepp, M.D., Professor of Clinical Medicine at the Philadelphia Polyclinic; Assistant Visiting Physician to the Philadelphia General Hospital; Associate in Clinical Medicine, Jefferson Medical College. Third Edition, Thoroughly Revised. Philadelphia and London: W. B. Saunders Company. Baltimore: The Medical Standard Book Co. 1914. Cloth, $4 net.

Owing to the number of new subjects which are constantly creeping into medicine, Dr. Goepp has found it necessary to revise the above-named book, in which form he presents the third edition. As heretofore it will be found of immense value in hurriedly reviewing for a State board. The range of questions selected makes the book cover practically every question that could be possibly asked. Besides, the answers convey an idea of how much space to alot to any given question. Certainly these 700-odd pages should prove as welcome to the State board applicant as its predecessors.

CHEMICAL PATHOLOGY. Being a Brief Discussion of General Pathology from the Standpoint of the Chemical Processes Involved. By H. Gideon Wells, Ph.D., M.D., Professor of Pathology in the University of Chicago and in Rush Medical College, Chicago; Director of The Otho S. A. Sprague Memorial Institute. Second Edition. Thoroughly Revised. Philadelphia and London: W. B. Saunders Company. Baltimore: The Medical Standard Book Company. Cloth, $3.25.

The subject of biological chemistry is daily attracting more attention, especially the part it plays in pathological processes, as the pathologist thoroughly realizes morphological pathology is near the exhaustion point. Therefore, if additional knowledge is to be thrown upon pathological processes, investigators must work along other lines than the morphological. During the past few years an immense amount of material has been added to the literature concerning biological chemistry, both physiological and pathological, but until Wells made his first book no attempt had been made to bring it together in correlated form. This edition was found to meet the needs of so many interested in this aspect of

pathology that the author, owing to the many additions to our knowledge in this line, has found it necessary to practically rewrite his book in order to bring it into accord with the latest thought. Going thoroughly into the chemistry of the cell, of enzymes, of bacteria and their products, of animal parasites, of phytotoxins and zootoxins, of immunity reactions, of means of defense against non-protein bodies, of inflammation, of disturbances of circulation and diseases of the blood, of edema, of diabetes, of uric-acid metabolism and gout, of the chemical pathology of the ductless glands, etc., etc., should and will render it a book sought after by all classes interested in medical advance. It is a book written along novel lines and bound to attract attention.

International Clinics. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles. By Leading Members of the Profession Throughout the World. Edited by Henry W. Cattell, A.M., M.D., Philadelphia, U. S. A. Volume II. Twenty-fourth Series, 1914. Philadelphia and London: J. B. Lippincott Company. Cloth, $2.

Amongst the mass of interesting articles there are at least one which should appeal to every specialist. The beauty of the series, however, lies in the simplicity with which each article is written, making it available to the general practitioner as well as the specialist. This particular number opens with an article on Health Before Birth: Antenatal Hygiene and Eugenics, by J. W. Ballantyne, M.D., F.R.C.P.E., physician to the Edinburgh Royal Maternity Hospital, formerly lecturer on antenatal pathology and teratology in the University of Edinburgh and in the Polyclinic, London, and closes with one on the Teaching of Sex Hygiene, by Maria M. Vinton, A.M., M.D., medical school inspector, New York city. Interspersed between these are any number of good vigorous articles on the various specialties.

The Clinics of John B. Murphy, M.D., at Mercy Hospital, Chicago, June, 1914. Philadelphia and London: W. B. Saunders Company. Baltimore: The Medical Standard Book Company. Bimonthly. Paper, $8 per year. Volume 3. Number 3.

Still they come, and just as interesting as when they first made their appearance. It is inconceivable how any up-to-the-minute, active, wide-awake surgeon can do without them. This number is just as full of interesting material as any of its predecessors, giving a complete and accurate résumé of the recent work done at the clinic of that renowned surgeon, John B. Murphy. In this number one is regaled with the reciting of the histories, course, outcome and operations on such varied conditions as ruptured tendons, severed nerves, bony anykyloses, fractures, ulcers of the stomach, sarcoma of the ovary and ankylosis of the jaw. As in other numbers, so here one will find about 200 pages full of practical suggestions, hints that can be put to every-day use.

MARYLAND MEDICAL JOURNAL

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BALTIMORE, OCTOBER, 1914

SCHOOL HYGIENE.

IN many instances the best way to reach the adults is through the school children. If the child can be taught an important principle in hygiene it is almost axiomatic that the parents will be inveigled into sufficient curiosity to reach them. Peculiarly, in the beginning, medical inspection of school children had as its prime object not the protection of the sick child, but his healthy schoolmates from contagious diseases.

Slowly it became generally realized that there was a much broader usefulness to which supervision of school children could be applied, namely, the correction of any physical or mental stigmata with which they might be afflicted. Though the first medical school inspection was inaugurated in France in 1833, it was not until 1888, in Strassburg, that Dr. Jessen opened the first school children clinic for children suffering with mental or physical defects. Today the idea has even been carried farther and the environment of the child is thoroughly studied so that the proper remedies can be applied. According to E. F. Brown, Bulletin of the American Academy of Medicine, health is a necessary complement of a communal economy. Should one single member of society be rendered unproductive through the complete destruction or partial reduction of his physical or mental vitality, society as a whole suffers in at least three different ways.

1. That which has been a useful productive element in our social order has been rendered economically sterile.

2. Society must therefore assume the obligation of caring for this non-producing unit through its producing units by taking a

share of the proceeds of the wealth-producing parts and contributing it to its economically pauperized member.

3. Usually the contribution by the producing members of society to the support of the incapacitated member makes necessary certain social sacrifices on the part of those who are usually unable to bear the burden without serious detriment.

The root of these three concrete social evolutions is traceable directly to ill health. Therefore, that which contributes to the physical well-being of the race is no small factor in the promotion of social content. In no wise can this social contentment be fostered better than by looking after the health of the child. In order to meet the stress of life the youth about to launch forth for himself must, to produce the best results, have a healthy body and mind. If not, he starts life handicapped and is apt to be distanced by those more fortunate. It is therefore a good investment to the community to be most careful about the hygiene of school children. It is a debt that the community owes to the children. It is an insurance against later ineffectiveness and social discontentment, Brown states. If adenoids cause respiratory disability which render the child less amenable to instruction, and accordingly result in the loss to the child of the opportunity to learn a skilled trade or profession, the child will suffer from the intermittency of unskilled employment and its concommitant low wage. Under these circumstances adenoids are enemies of the social order, which must be destroyed. Only in so far as we have the foresight and courage to look beyond the conditions which are causing our social discontent will we make possible the larger share of happiness which is certainly the due of an increasing number of our fellow-beings. One avenue, and a most promising avenue by which this happy result may be brought about, is school hygiene. Undoubtedly the past with its limited experience has proven that the time, energy and moneys thus expended have been well spent. The broadening of the supervision into channels not at present thought of will mean untold of returns to communal happiness through the production of citizens contented in mind and sound in body.

Medical Items.

In addition to the general fund of $1,500,000 recently given to the Johns Hopkins University Medical School, Baltimore, the General Educational Board is said to have appropriated a fund of $50,000 for the development of the Hunterian laboratories of the school.

Sir William Osler, formerly of Hopkins Hospital, now regius professor of medicine at Oxford University, England, has been made an honorary colonel in the British Army.

The twenty-fifth anniversary of the opening of Johns Hopkins Hospital, the twenty-first anniversary of the opening of the medical school, the second reunion of the alumni of the medical school and the first general reunion of the alumni of the training school for nurses will be made the occasion of an elaborate celebration at the hospital, which will open on October 5 and continue throughout the week.

Dr. H. Flournoy, resident psychiatrist at the Phipps Psychiatric Clinic of Johns Hopkins Hospital, left Baltimore August 14 to return to Switzerland in answer to his country's call for reservists.

The call came through the Swiss Ambassador at Washington. Dr. Flournoy will go home in a roundabout way, because of the shipping conditions brought on by the war. He will sail on an Italian steamer from New York, will go down the Atlantic, with possibly a stop at the West Indies, to the Mediterranean, thence to Marseille, France. From Marseille he will go to the mobilization point by rail.

Dr. Flournoy is a member of the medical reserves of the Swiss Army. He has served in that army.

So rapidly has the building of the new South Baltimore Eye, Ear and Throat Hospital progressed that Dr. Harry E. Peterman, the superintendent, expects to open it October 1.

Since their return from Europe in July, Dr. and Mrs. Henry Barton Jacobs have been occupying Whiteholme, their villa at Newport, where they will spend the remainder of the season, returning to Baltimore in the fall.

Much interest is taken in Baltimore in the advancement of Dr. Louise Pearce, formerly of Baltimore, to be an assistant to Dr. Simon Flexner of the Rockefeller Institute for Medical Research in New York.

She went to the institute last August from Johns Hopkins University, and is the first woman who has been made an assistant to Dr. Flexner.

Before her appointment she was the only woman on the staff of Johns Hopkins Hospital, and shortly before going to New York she was appointed to the psychiatry staff of the Phipps Clinic. Here again she was the first woman who ever received the honor.

Dr. and Mrs. C. Urban Smith have been spending some time at Eaglesmere. They made the trip in an automobile.

The demands of war will take away from the Johns Hopkins Hospital one of the members of its staff. He is Dr. Felix Landois, who is associated in surgery with Dr. William S. Halsted. Dr. Halsted has been spending his vacation in Europe, but he is now thought to be on his way to this country aboard the Mauretania.

Dr. Landois, who is a captain in the medical corps of the German Army, will go first to Breslau, and thence will proceed to the point where his regiment is stationed. He will sail as soon as he can obtain accommodations. Dr. Landois came to Johns Hopkins last January, intending to spend a year. The war means that his stay has been practically cut in half.

Dr. Landois was on his vacation in the West when Germany entered upon the war. He was communicated with and immediately returned to Hopkins to make preparations for his departure for Europe.

Dr. N. A. Christensen has been appointed accident physician at Mercy Hospital. He succeeds Dr. Thomas F. Bess, who resigned and went to Hinton, W. Va., to practice his profession. Dr. Christensen graduated last year from the College of Physicians and Surgeons.

Two women who have many friends in Baltimore and who are now in London are Drs. Mildred Clark of Brookline, Mass., and Mary A. Hodge of San Diego, Cal. They graduated from Johns Hopkins Medical School last June, and went abroad almost immediately.

The Johns Hopkins Hospital has lost one of its staff and the Baltimore Athletic Club is minus a star athlete as the result of the sudden departure on Thursday of Dr. Grant Ferguson. The physician has gone back to his native land, Scotland, to take part in the European war. He left for New York on August 6 to sail for Europe.

Dr. Ferguson was graduated in June from the medical department of the Johns Hopkins University. At the Baltimore Athletic Club he

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was considered among the best of the wrestlers. He is said to be the light heavyweight champion wrestler in the South Atlantic Amateur Association.

Dr. Joseph Spark, University of Maryland Medical School, 1913, has left the Municipal Hospital, and will probably locate in Martinsburg, W. Va.

Dr. T. A. Ashby and Dr. David Streett of the University of Maryland faculty attended the fifth annual reunion of the New York Medical Alumni of the University of Maryland, held at Syracuse, N. Y. Both professors discussed the merger of the University of Maryland and the Baltimore Medical School at the banquet. About 20 Central New York physicians attended the reunion.

Dr. and Mrs. Robert T. Wilson of 820 Park avenue has veen stopping at Baltimore Inn, Cape May, N. J.

Dr. George Hoyt Whipple has resigned as associate professor of Johns Hopkins University and has been appointed director of the Hooper Foundation for Medical Research by the board of regents of the University of California. Dr. Whipple is widely known in his profession. He is a graduate of Yale University and the Johns Hopkins Medical School. He served for several years in the Ancon Hospital in the Panama Canal Zone and is a member of many medical and research societies. Dr. Milton C. Winternitz has been appointed to succeed Dr. Whipple.

Surgeon Leslie L. Lumsden, Public Health Service, and Dr. John S. Fulton, secretary of the State Board of Health, are to make a thorough inspection of health conditions in Dorchester county. Dr. William H. Welch, president of the State Board, is now in Europe. On his return the board will take up the matter of appointments for six additional health officers. At the last session of the Legislature the State was divided into 10 sections and provisions made for a health officer in each district. So far, but four officers have been appointed.

MARRIAGES.

Charles F. W. Bove, M.D., Baltimore Medical College, 1913, of Cumberland, Md., to Miss Cecelia H. Flaig, formerly of Catskill, N. Y., at Catskill, August 22, 1914. Dr. Bove was formerly connected with St. Joseph's Hospital, Baltimore.

J. G. Fowble Smith, M.D., University of Maryland Medical School, 1906, of Sykesville, Md., to Miss Sara Frances Moore of Silver Springs, Md., at Elkton, August 15, 1914. Dr. Smith is a member of the Springfield State Hospital staff.

Alfred W. Yocum, M.D., Baltimore Medical College, 1912, of Sparrows Point, Md., to Miss Daisey C. Disney of Baltimore, Md., at Baltimore, in September. Dr. and Mrs. Yocum will make their home in China, where the doctor has been assigned to the Oxner Memorial Hospital in Pingtu, Shantung, as a medical missionary.

Oswald S. Lowsley, M.D., Johns Hopkins Medical School, 1912, of New York city, to Miss Katherine V. Staples of Troy, N. Y., at Round Lake, N. Y., August 20, 1914. Dr. Lowsley is associated with the Bellevue and Allied Hospital of New York city. He was formerly director of athletics at the Baltimore Athletic Club and Maryland Swimming Club. Miss Staples is a graduate of the Johns Hopkins Nurses' Training School.

Harry W. Rosenthal, M.D., College of Physicians and Surgeons, to Miss Ruth A. Mashbach, both of Baltimore, Md., at Baltimore, August 8, 1914. After October 1 Dr. and Mrs. Rosenthal will be at home at 3524 Fairview avenue.

DEATHS.

Lafayette Coffman, M.D., Maryland Medical College, 1905, of Peggs, Okla., died in Talequah, Okla., August 3, 1914, aged 45 years.

James B. Garvey, M.D., College of Physicians and Sugeons, '84, a Fellow of the American Medical Association, died at his home in Dunmore, Pa., August 23, 1914, from acute gastritis, aged 71 years.

Leonard H. Spalding, M.D., University of Maryland, '69, for thirty-three years a practitioner of Peoria, Ill., died in Rochester, Minn., August 22, 1914, from heart disease, aged 69 years.

Thomas Joseph Murphy, M.D., College of Physicians and Surgeons, '99, a member of the Maine Medical Association, died at his home in Bangor, Maine, August 14, 1914, aged 41 years.

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EFFICIENCY AND THE QUALITY OF LIFE.*

By Clement A. Penrose, M.D.

Gentlemen, Mr. President:

I appreciate very much the invitation from The Baltimore County Medical Association to address them this afternoon and hope most sincerely that my paper will interest them.

For many generations a just criticism of the scientific type of mind has been its tendency to dabble too much with detail and shun a more philosophic consideration of the natural or unnatural conditions which promote or retard the growth of an individual or race.

I have purposely selected a subject which in a narrow sense is not strictly speaking a medical one. From a broad standpoint, however, it must greatly concern the physicians of the future on whose labor, instruction and influence, the fate of many life problems must necessarily depend.

I ask the pardon of those who will object to the rather pessimistic point of view taken, and justify myself merely by the statement that no life progress is possible in a community where everyone is satisfied with the conditions around them. I certainly am not and for this reason have repeated, by way of emphasis, two or three statements made in a former paper believing honestly that they are suggestions which have proved of some value to a few people.

A biologist once said that the human race owed its very origin to a discontent. Certain monkeys, tired of climbing trees, determined to walk erect. He was speaking in jest, but his words contained a fundamental truth, which has been exemplified throughout all ages.

I have selected as the title of my paper "Efficiency and the Quality of Life," firmly believing that the first attribute is dependent almost entirely on the second.

Dr. Johnson (Irene, Act 3, scene 6) cautions us to,

> "Reflect that life like every blessing
> Derives its value from its use alone."

*Read before the Baltimore County Medical Association, March 18, 1914.

The great scientist, Sir Oliver Lodge, said truly "That science does not take into account sufficiently the general beauty of things." Natural selection may explain satisfactorily the varying colors of insects and birds, etc., but what about our landscapes, the mountains and valleys with a background of beautiful clouds, the sunset at sea, what is their meaning, what do they stand for, what is their purpose?

Medical men have studied for centuries the various phenomena of life in its many phases, but have too long neglected the problem of life quality, its protection and propagation, its beauty and the force of its example. Modern eugenics is a vain protest against existing conditions, in which we hope by careful selection to improme our race material. A crusade for wiser marriages, however, is not nearly as important as the education of parents in the principles of mental Hygiene. It is also true that we may have the best of materials, yet create nothing owing to faulty methods of building. We are probably marring (as the bill posters do the landscapes,) our race quality and general efficiency by these signs of the times, the many isms, the hysterical cults and rattle-brain theories of our present day, the result of improper training.

We must, therefore, first protect ourselves, as much as possible, from all these wild leaps in the dark, from all pernicious foreign influences and foolish panaceas and then determine how we can preserve and develop in our children those qualities which are best for the race. It is only through posterity that we can hope to offset the bad traits we have ourselves acquired, and which we are too prone to excuse by the adoption of some fallacious idea in the effort of self-justification. Self, that is the keynote to the present situation, it is the moving spirit in practically every modern movement of any importance. I doubt if ever in the world's history the civilized nations have had a greater need of more unselfish living and teaching, of greater patriotism and love of country and home, than at the present time.

Modern civilization has concerned itself too much with present conditions in its attempted cure of all social evils, by education and various forms of philanthropy, and has considered too little posterity and the great responsibility of race regeneration and preservation which comes to us with every intellectual stride forward more and more clearly as the unselfish mission of advanced culture.

We have in life insurance and in bequests to charitable enterprises, etc., undoubted signs of our awakening to this impulse, which the love of our children, our friends and country has first inaugurated.

There is, however, a broader, more humanitarian outlook, braver than any other, because so unselfish, which is the pride in race and which considers above all the quality of human life, rather than the conditions of living.

The expression of this is exemplified in the courage of the

mother, who sends her sons to the war, the father, who dies for his home, and the fate of the many heroes, who so bravely gave up their lives in the recent tragic disasters on land and sea.

It remains for us as exponents of the best schools of science, art and literature, as those who have had the good fortune to grow up under the most modern and beneficial influences, to endeavor to find out and then teach our brothers how this Race quality can best be utilized, augmented and handed down to the advantage of posterity and not wasted.

The very qualities which make a man or woman desirable in a community are often unfortunately those which help to cut short his or her life and keeps him from giving to posterity that which would be most desirable. Wars too often kill off the flower of a country, epidemics are prone to select the unselfish and neighborly.

Our boasted civilization will come to naught, and our philanthropic enterprises in every direction will be futile, if we in the interest of improving the conditon of life neglect improving the quality of life. This is the great responsibility which rests heavily upon our shoulders to-day. Unfortunately there is no evidence, according to the eminent English authority, Dr. Havelock Ellis, that the human race has improved much in quality in the last one hundred years, in fact rather otherwise. In his book, "The Problem of Race Regeneration" (Moffat Yard & Co.) he demonstrates that wild philanthropies, often by making people too dependent and by preventing their elimination, which a struggle for existence would necessitate, are actually decreasing the average of human efficiency and lowering the quality of human life. He shows that our increasing population of feeble-minded and inefficient is today the great menace of race regeneration. As he puts it, we must concern ourselves less with the "unemployed than the unemployable," the real danger. In the United States today there is about one mental defective to every 184 normal individuals.

When the quality of human life is lowered in a race how are we able to lift it up to a higher plane? In but one way, the elimination of the unfit as far as posterity is concerned by a number of different methods. By unfit I mean both mentally and physically unfit.

Biology has taught us three great facts regarding life:

1. That the offspring can inherit equally from both parents, but that the nutrition of the growing life is dependent solely on the mother.

2. That congenital characteristics are easily inherited, whereas acquired are possibly so, but not as a rule. For instance a defective child could receive the most careful modern nursing and education, and all the assistance which money could give it throughout its life and yet produce little better progeny than one who was more or less neglected. In spite of all efforts we can do little to better the quality of his life.

3. We know from biology the great law of the survival of the fittest, through the power of natural selection. Should the earth, as an example, gradually cool, in the course of a few years those people who could best stand the cold would survive and this quality would be handed down to their children.

The earnest contemplation of these three great laws would, I think, give us sufficient argument against some modern tendencies if nothing else were considered.

If a child can inherit half its qualities from its mother and is dependant while an embryo and infant for all of its nourishment from her body, how important is it that the mother preserve the mental make up and physical qualities which make of her a good mother.

Otto Weininger says truly in his book on sex and character "That the external characteristics of an individual do not alone determine his or her sex." Some men are more feminine than certain women, some women more masculine than certain men. No matter how we may try to educate or change them they will preserve those characteristics and greatly influence the succeeding generations.

By degrees our civilization, which shows so clearly a lessening of human efficiency, is allowing women with a highly developed masculinity to compete with the poorer types of men in many fields of labor. How very glad are these men to have the women work, vote and support them. An inefficient type of man is generally married by the masculine woman for the reason that she can afford to marry and will probably have better chances than a more womanly type with such a man. History undoubtedly proves masculine women almost always are attracted to the weaker and effeminate types of men, as for instance Sappho, Rosa Bonheur and George Sand, etc., etc., who are usually not attractive themselves to manly men.

As the efficiency of the men decreases the masculine type of women will gain the ascendancy. She will earnestly put through a number of ill-advised and poorly thought out movements, along philanthropic lines, on a par with Christian Science, Dowiesm, Anti-Vivisection League, etc., etc., supported chiefly by women's influence. She will marry the man of her choice and give to posterity an inferior order of human being, *i. e.*, women too masculine to bear children safely, nourish or rear them properly, and men without the masculine qualities necessary for the regeneration of a race which is only possible when sprung from a normal parentage on both sides.

W. L. George in an article (Atlantic Monthly, December 1913) written in defense of the feminist cult, goes so far as to state that "there is no sex and that there should not be any sex distinction." Professor William T. Sedgwick (New York Times, December 14, 1913) has in answer to this remarkable doctrine shown that fortunately this statement would apply only to a minority class and that women and men differ greatly, even in

their embryonic life, and are absolutely suited only for certain occupations. W. H. Mallock in his lecture on Socialism (Public Lecture Bureau of the National Civic Federation, February, 1907) shows pretty clearly the fallacy of the equality of man without ever considering him in contrast to woman.

Should present day conditions continue, however, one can predict very well what will hapen in the future. The real womanly type of woman, God bless her, will become as rare as the masculine type of man.

When the men of a race are lowered in their efficiency as aggressive fighting men the death knell of such a people has already been sounded. This happened long ago to Egypt, Rome and Greece, etc. The true cause of their downfall was a decline in the quality of their men, hunt as we may for other reasons.

Every American should read Homer Lea's wonderful military book, "The Valor of Ignorance," which shows only too well the menace now to this country from military inefficiency. The advocates of disarmament and abolition of the military strength of the United States should consider carefully recent statistics before presenting their theories to the ignorant public.

In our Spanish-American War fourteen men died from preventable diseases to one killed on the field of battle. In the Japanese-Russian War one man died of preventable disease to four killed in battle. In other words, they were fifty-six times as efficient as we were in avoiding death from preventable diseases. In regard to illness not resulting in death we sent 170,000 men to the Spanish-American War, 150,000 of whom became incapacitated for some time in some way or other. Japan sent 1,500,000 to their war, of whom less than 20,000 were incapacitated. In other words, 90 per cent. of our men and only one-tenth of 1 per cent. of the Japanese reported to the field hospitals for preventable illness.

A Japanese office, when asked what they did to deserters from their army, said he did not know, as no one had ever deserted. In one year about 600 men in our army deserted to every 10,000, and these all enlist voluntarily. Enlistment in Japan is compulsory.

From this it can readily be seen that more loss of life results many times over from military inefficiency than the actual loss in battle, and the same can be said of inefficiency in every department of life, the sacrificed usually being of the best element in the nation.

Before many decades the Teutonic races will need all of their courage and stamina to hold their ground. May the Almighty help them in their regeneration, for the outlook is very bad. Stewart Chamberlain in his wonderful work, "Foundations of the Nineteenth Century," shows how important these people are in the world's civilization, what they stand for, what they have done in the past.

More than ever we have need of fighing men in every department of life, and women of the right sort to influence them to

do what is right and not, in an ineffectual way, do the work for them; women who from the cradle to the grave will be the inspiration to mighty effort, and *who* are worth fighting for.

It is time that we got back to the true home as an ideal standard of living. Where the manly father is an example to the stalwart sons, and the womanly mother is an example to her gifted daughters. Where each member of the family has his respective duty well outlined and does it cheerfully and thoroughly. This would mean simpler living and less complex thinking, the only salvation, in my opinion, to the people of these United States.

Every man or woman carries in his or her mind, perhaps subconsciously, the image of an ideal home. This is usually small and cozy, on a green meadow with honeysuckle vines, tall trees and the fragrant aromas from many delightful sources in one's nostrils. The call of a primative ancestry will not be denied and cannot be entirely obliterated by the intricate mental process of every-day life. Although we must agree with the Hindoo philosopher, Rabindranath Tagore, that a world without evil and pain is inconceivable, nevertheless a home like the above, in which has been created an atmosphere of love and mutual respect, comes pretty close, after all, to being an earthly Paradise. A home like this would defy even the mechanisms of a wily politician, while the men of the family are away toiling for the loved ones. Discord could hardly be sown in such an environment.

But what about the squalid homes of our large cities today, where poverty, ignorance and discontent go hand in hand. Will families long remain united when the votes and favors of wives and daughters can be bartered for, where material gain or preferment of some kind would be the price?

The Feminist movement will obviously effect two fundamental elements necessary to the regeneration of the Human Race—

The quality of life and—

The Home.

It is, like so many schemes which arise daily in our midst, the result of a wave of mental unrest ever spreading over the civilized countries, and produced by the complexity of modern life. Where we once had one standard we have a dozen; one friend yesterday, now a thousand (so called); where we knew our own town formerly, we now know many countries. We seek all sensations and worship every idol. The ever-burdened brain turns anxiously from one thing to another in the effort to understand and explain its own condition, the explanation often resulting in the adoption of some cult which the poor mind-weary individual believes is the panacea for all the troubles of the world. Like that Christian whom the wise Hindoo said "was a man who tried to make everyone else do what he never did," he will always try to show the other fellow what really is his duty. We can only make life simpler by living more simply and save posterity by bringing up our children to be better men and women.

You may say that this is all very well in theory, but where is

the practical remedy for the present time. We all agree that simple living is desirable, but how can we live simply in these stirring, restless times, in this age of strenuous competition? Simple living is really possible anywhere and is to a great extent subjective. A person often most obscure and unknown leads a more complex mental life than the ruler of a great kingdom, by unnecessary attention to detail and the endeavor to remember too much. What we should forget is as important as what we should remember, as the mind, according to a great anatomist, is only capable of assimulating a certain number of facts, which should therefore be well selected.

Whether we can bring about any radical changes in this generation is very questionable. We can, however, certainly help our children by a better system of education, by bringing them up with more veneration and respect for their elders and a greater pride in race and love of country.

With the President of the United States depicted as a pig in Puck or Judge, with our dearest illusions often made the subject of ridicule by yellow-journalism, etc., what wonder that the children should grow up with very few standards or ideals so necessary in life to keep it above the commonplace.

Personally I question the advisability of too plain talks on sex and sexual questions with very young persons and have seen literature on such subjects by ignorant authors which could only do a great deal of harm.

Zangwell, the playwright, in a recent popular play speaks of the United States as the "Melting Pot" for all nations, where different races are thrown into the caldron, melted down and purified.

Poetic, but not exact, we are in reality the dumping ground for the world's outcasts, mental and physical defectives, the recipient of many vices, diseases, and inefficient people from all corners of the globe, who are helped no doubt by mixing with a little good Teutonic blood, but with a very detrimental effect on this race as far as posterity is concerned.

Since 1904 over 2,092,746 emigrants have come into New York State, to which have been added by birth about 1,400,000. T. W. Salmon, in his report to the New York Legislature, February 14, 1912, said that 33,311 insane patients were committed to the state institutions, 8,000 of which were alien. In other words 25 per cent. were of foreign origin. These figures did not include mental defectives, such as the feeble minded, idiots or imbiciles. Following his report certain radical changes in the laws, governing the admission of such emigrants, were suggested by the State Board of Alienists. In San Francisco, acording to Dr. M. W. Glover (The Journal of the A. M. A. June 15, 1912), 1,077 aliens from the Orient, out of 2,255 admitted from September 23, 1910, to November 30, 1911, showed the ova of that most dreaded parasite, the Hook Worm (in their stools) a most appalling percentage, which were fortunately excluded by the vigilance of our

Public Health and Marine Hospital Service. A special Committee, February 13, 1912, reported to the Society for the Prevention of Cruelty to Children, that there are in New York close to 7,000 feeble minded children in the *schools,* and about 10,000 altogether, 30 per cent. of which are the progeny of aliens or naturalized citizens.

A few years ago statistics showed that to every million of population Germany had less than five murders, England less than nine, and the United States one hundred and eighteen. More murders are committed in this country, according to Judge DeCourcey of Massachusetts, than in any ten other civilized countries, including Russia. There were 900 more murders in 1911 than the year before, and only 86 executions. A murderer has three chances to one against being brought to trial, ten chances to one of ever being put into the penitentiary, and eighty chances to one that he will escape the death penalty. Will poorly trained women on our juries complicate or help out this situation?

Dr. Hoffman, the actuary of the Prudential Life Insurance Co., said that in 1911 the small cities of the United States, with a population under 250,000, for the first time in the history of the country showed a higher suicide rate than the cities with a greater population and this increase has been about one-half in the past decade. We averaged in our small cities in the year 1911, 198 suicides per million inhabitants, and in the large cities 195. We averaged about 15,000 suicides in the United States last year. According to foreign statistics about three men commit suicide to one woman, but a much larger proportion of women take their lives on account of unsoundness of mind, almost twice as many as the men from this cause, showing a greater nerve weakness under strain, etc. Suicide increases absolutely in proportion to the progress and complexity of civilization and with insanity is rapidly growing in our cities, both large and small. There is a great falling off of both these conditions when we compare statistics from the farms and the rural districts with those of the cities.

Well known authorities agree that the three main factors giving rise to our unfortunate prominence in these matters are, first, the reception of so many alien defectives into the country; second, the crowding together of our men and women in the cities; third, the poor bringing up our little children are receiving in their homes. We certainly need better fathers and mothers, who will not leave the teaching of their children so much to the schools, a training which, Miss E. E. Lynch recently has shown, is such a bad one. Miss Lynch says that our public school's sole trend is towards but one point, admission to the high school without regard to individual needs or fitness. As only seven out of one hundred ever get to the high school the training of the other ninety-three is absolutely inadequate and the children are thrown back on their homes for education, or must go to work, or run wild on the streets. The training of the high school tends

towards the college and yet only five of the seven go to college. Doctor Frank Crane is right when he says everyone should be taught a trade.

What is the result? Whether we consider the social evil, the hight cost of living, low wages, infant mortality, suffrage, etc., the root of all these questions goes right back to one consideration—inefficiency. The inefficient girl cannot run her home properly, please her husband or care for her baby, and the inefficient boy who has grown up without a trade, intolerant of all discipline, will only work when he feels like it for a salary twice as much as he is worth.

So much that is good in our country has been corrupted by vicious foreign influences that it is surprising that we do not have stricter immigration laws. If we could prevent some of our best women from contracting so many foreign marriages it might also help. The idea of doubling the number of this illiterate and mentally unfit vote is most repugnant to the investigator along these lines. That such mothers should yearly add to our already heavy burden is intolerable.

The women hold that they will purify politics, but what will politics do for them? Does it improve the men? Will they be proof against its contamination? Alas! I fear not, when one sees the effect that it has *already* had upon them. Sir Almroth Wright, the distinguished British biologist, says truly, "That a sure sign of advanced civilization is the observance of those unwritten laws which every man, and little boy knows, namely that it is wrong to leave another fellow in the lurch, to fight one smaller than one's self or to strike a woman."

The militant suffragist when she resorts to violence against a policeman or public man, etc., is immoral, because although not perhaps always breaking a statutory law, she is unquestionably breaking an unwritten and unassailable commandment of advanced civilization, which we become aware of the moment we see it violated.

In the civilized world there has existed, as it were, a truce between man and woman based on the solemn covenant that within the confines of civilization (outside the rule lapses) the weapons of physical force may not be applied by man against a woman, nor by woman against man.

Under this covenant the half of the human race, which most needs protection, is raised up above the waves of violence. It is this covenant, so faithfully kept by man, that the militant suffragist violates.

A prominent Suffragist, from New York, said "that while she deplored bloodshed she thought it a good advertisement for the cause." Social degeneracy of this nature can hardly be called a good advertisement of any cause, it has not benefitted anarchy and it will never help Woman Suffrage. Justice Coleridge, although rather favorable to women voting, recognized the immorality in such acts of violence when he sentenced Mrs. Emme-

line Pankhurst and Mrs. Pethrick Lawrence at the Old Baily to nine months in jail and to pay the heavy costs.

"Does the woman who is poisoned by her misplaced self-esteem, and who flies out at every man who does not pay homage to her intellect, do anything really worth-while for the quality of her race? She is affronted if the man tells her that the glory of woman for him lies in her powers of attraction, her motherhood and unswerving allegiance to the ethics of her sex. In the wake of these imbittered women come troops of girls, mere children, who are given ideas about their moral, intellectual, and financial values such as men never conceived. Their life program is to have their husbands support them, to that end giving up their time and freedom for many hours in the day, but they themselves must not be asked to give up any of their liberty or subordinate themselves at all to their interests." A happy outlook for marital bliss in the future if such advice and teaching, so prevalent today in colleges for girls, be accepted.

Never in the world before has woman had such an opportunity to show her quality and unselfishness. Let her give up her ambition and forget her private grievances and refuse to accept the ballot, which only twenty per cent. of her sex want and eighty per cent. are indifferent about or actually oppose. Let her be careful lest, like Lucifer, her pride leads to her down-fall.

The Suffragist will tell you that women for centuries have led a life of bondage with suppression of their best possibilities and are *still* so hampered that they cannot develop. In a second breath she will say, that if she is allowed to work side by side with man she will lift him up to the high moral plane which women enjoy and not descend to his poor level.

Fallacy after fallacy. First that this continued oppression should have, contrary to the history of nations, produced such a noble creature, and *second* that a woman inheriting, as I have shown, qualities from both parents equally, should perform the same duties as a man, with even less physical resistance, and still not fall to the common level or below it.

The real truth is that in civilized races woman has been made what she is by the reverence of man for her. He has fixed her position in the home and in his heart, and given her a standard up to which she must live if we are to preserve any ideals at all in this too material world. Can a woman reform a man by marrying him? Can she uplift a man by doing his work, by undue intimacy with him, by drinking, smoking and swearing with him? The answer is too apparent to be discussed. I have been told by men prominent in affairs that in various states the women have resorted to a most corrupt form of lobbying, even threatening public men who have been unkind enough to disagree with them. Instances of this sort of thing we have had right here in Maryland. A foeman worthy of his steel is what any brave man desires. It is unfortunately otherwise with the feminine gender in politics, who usually resent any decided opposition.

The excessive abuse of State's rights is the cause of more corrupt politics and unfair legislation than any other factor in our government. The crimes of individuals stand in an inverse ratio to the power of a state to enforce its laws.

When one sees what a military government has done for Cuba, the Philippines, Panama, etc., in a short time, I am not sure but what we would be purer politically if we had a more military form of government. We would certainly be better hygienically.

I believe emphatically in obligatory military training for every able-bodied man in the community, military schools and the boy scout idea, from the standpoint of discipline and physical culture, as well as the patriotism it would engender, but for Americans only. Our latest folly is the training of foreign soldiers in our military schools and exposing the weakness of our equipment in this direction to the world's gaze, while we are teaching them how best to overcome us.

What we need are better men in civic life and better women in the homes, and better fathers and mothers. I cannot see anything else, but the lowering of the efficiency of the race if women do men's work or men, women's work. Men's duties and women's should be complimentary in the social scheme, like parts of a machine they run along together better if each is doing its own work well. If there is lack of harmony in the daily routine of life, the fundamental unit of civilization, The Home is utterly disrupted. The actual physical labor done by each is less important.

Our masses need more natural recreation, like the peasants of Europe, games, dances and various forms of outdoor pastimes, only possible when the conditions are as cited above.

I have recommended a very good plan to many families under my care which is to spend a part of every Sunday in the woods, a long walk, with a simple luncheon in some picturesque spot, for the whole family. I believe today that the Childrens' Playground Associations, thanks to the women, are meeting one of the greatest needs in the community.

The ever growing tendancy for the people to move out into the suburbs shows an unconscious revolt against the crowding together in the large cities, and owing to the distances from places of employment necessitates more than ever the importance of the mother keeping close to the home. A greater feeling of independence and freedom from petty cares is developed in a rural residence which more or less dissociates one from the strain and turmoil of the working world when our day's work is done and when we most need complete relaxation. Cowper was right when he said—

> "God made the country and man made the town
> What wonder then that health and virtue, gifts
> That can alone make sweet the bitter draught
> That life holds out to all, should most abound
> And least be threatened in the fields and groves."

GENERAL PARALYSIS AS A PUBLIC HEALTH PROBLEM.

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THE object of this paper is simply to state the problem of general paralysis in the language of preventive medicine. We have to consider a disease so formidable that the mortality rate practically coincides with the morbidity rate. Let us attempt to answer some of the questions which we would ask if we were examining any other important cause of death from a public-health viewpoint. What is the incidence of the disease? Do the mortality reports accurately show its prevalence? If not, in what mortality groups shall we be most likely to find it reported? What is there of practical sanitary interest in the age, sex, race, occupation and environment of the victims of the disease? By what means may it be controlled?

The nation is the field in which an inquiry should be undertaken to answer these questions, but unfortunately there are two great obstacles to such a wide study. One is the fact that little more than 60 per cent. of the people in the United States are born and die in what is termed the "registration area"—that portion of the country in which satisfactory records of the causes of death are made. The other obstacle is the fact that the status of psychiatry in different parts of this country varies so greatly that the clinical reports of hospitals for the insane cannot be satisfactorily compared. It is necessary, therefore, to choose a narrower field and to sacrifice completeness for accuracy. New York State has an efficient law for the registration of births and deaths, and the insane are treated in hospitals making use of uniform methods of collecting scientific data. Moreover, statistical studies of the work of the hospitals are conducted, under a carefully-devised general plan, by a competent medical statistician associated with the central supervising board. If our inquiry is made in New York, therefore, we shall be able to place much more confidence in its results than if we undertook to make it a larger territory.

As general paralysis is practically a uniformly fatal disease, we may read the record of its incidence in the mortality rates. We find that in the year ending December 31, 1913, the New York State Department of Health reported 591 deaths from this disease. The fiscal year of the New York State hospitals ends September 30. In the year ending on this date in 1913, 638 cases of general paralysis died. The discrepancy is due to the fact that a considerable number of deaths in general paralysis are assigned to other causes. Of the 638 deaths in this disease which occurred last year in the New York State hospitals, only 487, or

77 per cent., were assigned to general paralysis. The others were assigned to a variety of other causes. In about 1 per cent. of the paretics who died the causes given are definitely associated with the lesions of the disease itself. Such causes are cerebral hemorrhage, meningitis and syphilis. There can be no question of the impropriety of ascribing deaths in general paralysis to these causes. It would be as logical to give "peritonitis" as a cause of death in cases of typhoid fever in which perforation occurs, or to give "hemorrhage" as a cause of death in pulmonary tuberculosis. About 10 per cent. of deaths in general paralysis in New York State hospitals were assigned to causes which are really terminal conditions in the disease or accidents dependent upon its existence. Among these may be mentioned decubitus, purulent infections, septicemia, broncho-pneumonia and edema of the lungs. There may be some doubt as to whether it is proper to give these as primary causes of death in a disease like general paralysis, in which the pathological process is well understood and the relation of the lesions in the brain to the general bodily disintegration is definitely known. We do not give such causes in deaths from cancer, and there seems no special reason for doing so in general paralysis. Personally, I think that it is most undesirable to term such conditions primary causes of death. They are distinctly secondary causes, and this fact should be indicated in death certificates.

In about 6 per cent. of all deaths in general paralysis in the series under consideration the causes assigned bear little relation to the disease itself. Among such causes may be mentioned tuberculosis, typhoid fever, cancer, hernia and organic diseases of the heart and of the kidneys.

So in our State hospitals, where very few cases of general paralysis die without a diagnosis of the disease being made, general paralysis is given as the cause in only 77 per cent. of deaths. If this is true of deaths from this disease in the community at large, 768 deaths must have occurred in the State of New York from recognized general paralysis during the year ending December 31, 1913, instead of 591, as reported. But it is undoubtedly true that a very much larger proportion of deaths in this disease occurring in the community are reported under some complicating physical condition, even though the existence of general paralysis is recognized, than in institutions where the disease itself is so well understood.

It is a strong statement to make, but I believe that general paralysis is practically unrecognized outside of institutions for the insane, and that the small excess in the number of deaths in recognized general paralysis reported in the State at large over those reported in instituions for the insane can be accounted for almost wholly by deaths among patients with general paralysis who have been discharged. Few persons, even those engaged in institution work, realize how many cases of general paralysis

are discharged from our public institutions and are never readmitted. During 1911, 1912 and 1913, practically one-fifth of the men and one-fourth of the women who were admitted with general paralysis were discharged, and of this number less than one-half were ever subsequently readmitted. The other half died in the homes, and, as the diagnosis was usually made known by the hospital authorities to the friends and relatives as well as to the family physicians, I believe it is among these persons, almost exclusively, that the deaths from recognized general paralysis in the community are reported.

Thus far we have made little progress in determining the total death rate from general paralysis. We must examine other mortality groups for information as to the number of deaths from general paralysis in the community. Under what conditions shall we be most likely to find them reported? Obviously, a large number will be found reported under the names of those diseases which really constitute terminal conditions in general paralysis. I am afraid that those reported in these groups are so deeply hidden that it is impossible to devise a practical means of inquiry which will disclose them. There must be many cases of general paralysis dying at home, however, in which the mental and nervous symptoms are too prominent to be ignored in death certificates. Some causes reported which might arouse suspicion that general paralysis is the real disease are "softening of the brain" (150 deaths) and "paralysis without specified cause" (716 deaths). We know the age period in which general paralysis is most frequent, and I think it would be entirely feasible to ascertain from the State Health Department the names and residences of persons dying within this age-period from the two causes mentioned, and then to obtain from the physicians who signed the death certificates information as to whether mental symptoms had existed before death and as to the duration of the disease. Such an inquiry would give us valuable clues regarding the frequency of unrecognized general paralysis. Dealing as we are with a disease every case of which must ultimately come to the attention of public-health officials through a death certificate, the mortality lists afford the most promising field of study.

Another means by which it might be thought we can estimate the incidence of unrecognized general paralysis is to proceed forward from infection with syphilis instead of backward from the death certificate. Until recently no one knew, even approximately, what proportion of cases of syphilis terminated in general paralysis. Many estimates have been made, most of them upon very slender evidence, but the first extensive study was that made in 1912 by Pilcz and Mattauschek. They examined the records of 4134 officers of the Austrian army who had contracted syphilis between 1880 and 1890, and they ascertained that about $4^{6}/_{10}$ per cent. had developed general paralysis by 1912. If this proportion exists in other groups of population, and if we had reliable infor-

mation as to the number of persons with syphilis in the community, it would be possible to predict with some degree of accuracy the number of cases of general paralysis which will occur annually. Unfortunately, neither of these assumptions is correct. We know that many conditions of race, personal susceptibility, possibly heredity and other factors have marked influence in determining whether syphilis invades the central nervous system or not, and, if it does, in what form its manifestations will appear. Estimates of the number of cases of syphilis existing in the community vary so enormously that it is apparent that they are mere guesses. Therefore, we must abandon this approach to our problem.

A more practical plan is to attempt to discover the number of paretics in groups of dependent people in such institutions as almshouses, workhouses and hospitals for the treatment of chronic diseases. Here it is possible to obtain some interesting evidence, although very little careful study has been made of such conditions. Dr. A. J. Rosanoff once examined the necropsy records in a large general hospital, and, although I do not know of any formal paper in which he has made his results known, he has told me that he found not a few cases in which the anatomical findings left no doubt that general paralysis existed while this had not been suspected during life, and, in some cases, it was not assigned as the cause of death even after the anatomical findings were made. It is a matter of common knowledge that a number of paretics of a simple dementing type are to be found in our almshouses and workhouses. I have often seen them in inspections of almshouses. They are often unrecognized in general hospitals. During four years 11 cases of general paralysis were admitted to the United States Marine Hospital at Boston among about 3000 sailors admitted for all causes. Only five of these cases, as far as I have been able to learn, have been committed to institutions for the insane. The others died in the hospital or remained under treatment in the general wards, occasioning little more trouble than other chronic cases. It would be a most interesting experiment to have a census of the paretics in the almshouses and county hospitals of New York made by a competent psychiatrist. Such a study would only require about six months, and would cost only a few thousand dollars.

It seems strange that so little has been done in this field, but I think it is due principally to the fact that the psychiatric interest in general paralysis has overshadowed all others. I believe that much can be expected from a general awakening to its public-health aspects. Until such investigations as these have been made we must give up the attempt to estimate the number of cases of unrecognized general paralysis and return to the consideration of known cases.

With the information in our possession at the present time we are able to state that not fewer than 1000 persons in whom gen-

eral paralysis is recognized die in New York State every year. Let us compare this with the lives lost from some other important preventable diseases. It means that *one in nine* of the 6909 men who died between the ages of 40 and 60 in New York last year died from recognized general paralysis, and that *one in thirty* of the 5299 women who died in the same age-period died from general paralysis.

The number of deaths from general paralysis in New York State last year about equaled the number of deaths from typhoid fever. The following table gives the number of deaths due to the 10 most important specific infectious diseases. Of course, deaths in measles, typhoid fever and scarlet fever will be found also under the names of some of the complications of these diseases, but it should be remembered that these primary diseases are not invariably fatal as general paralysis is. Many of the patients with measles who died from broncho-pneumonia would have recovered but for this complication, while the paretics with broncho-pneumonia would have died even if this complication had not arisen. No attempt is being made to compare the prevalence of general paralysis with that of other diseases—we are trying only to estimate its share in the mortality.

1.	Tuberculosis (all forms)	16,133
2.	Pneumonia	9,302
3.	Broncho-pneumonia	7,217
4.	Diphtheria and croup	1,854
5.	Influenza	1,381
6.	Measles	1,071
7.	Typhoid fever	1,018
	General Paralysis—Recognized	1,000
8.	Scarlet fever	837
9.	Whooping-cough	818
10.	Syphilis	782

It may be interesting to compare the number of deaths from these causes with the number from some other causes which exact a heavy toll of human life. All forms of meningitis were responsible for 842 deaths, cancer of the breast for 809, and the total number of deaths due to injury by vehicles was 478. We hear a great deal about the appalling number of homicides in this country. There were 459 deaths from this cause in 1913, less than one-half the number due to general paralysis. Locomotor ataxia is of particular interest to us in this connection. There were 238 deaths from this cause. As the duration of this disease is about five times that of general paralysis, there must be about the same number of persons with each of these diseases living at the same time in the community.

Thus we have seen that general paralysis constitutes a public-health problem of the first magnitude. What can be done to control it? The relation of general paralysis to syphilis needs no

discussion in this connection, and so we can turn to a very brief consideration of the means at our command for doing the only two things which can lessen the number of cases of general paralysis. The first of these is preventing well persons from being infected with syphilis; the second is preventing syphilitics from having general paralysis.

The first problem belongs to venereal prophylaxis, a field of preventive medicine in which a few definite lines of attack have been established, and in which many agencies are at work. Theoretically, this is as hopeful a field as any in the prevention of disease. Practically it presents apparently insurmountable difficulties. The prevalence of syphilis depends upon prostitution more than upon any other cause, and this great problem is so woven into every phase of civilized life that one wonders if it is within the power of the race to cope with it. If the prevention of syphilis is not an encouraging field for sanitation, recent work in the army and navy has shown us that it is a most promising one for hygiene. The success of personal prophylaxis is the bright spot in an otherwise gloomy picture.

The most interesting contribution which we have to make from psychiatry is information regarding the amazing prevalence of a result of venereal disease which has thus far escaped adequate attention, even on the part of those especially interested in venereal prophylaxis. This may not be the most important contribution, however, for the impression is gaining ground that the facts which psychiatry is gleaning regarding the springs of human conduct may serve the high purpose of enabling us to deal better with the problems of personal life. The deeply-rooted institution of prostitution depends for its continued existence most upon our failure to meet sexual questions frankly and courageously. Perhaps when certain mechanisms which clinical studies in psychiatry are defining are fully understood, clearer vision and the liberation of powerful new resources may enable mankind to deal with prostitution as it is dealing with religious intolerance, political inequality and some of the diseases which menace human life and happiness.

Preventing persons with syphilis from developing general paralysis belongs partly to our own work. It is possible that moderation in the use of alcohol, avoidance of mental stress and attention to many factors in personal hygiene may help in preventing a person who has syphilis from having general paralysis. We do not know. There is urgent need for research in these matters. Our textbooks are filled with ancient references, most of which have never been sufficiently verified or scientifically studied. Whatever information future studies may give us regarding the exact influence of such factors, it can be said at the present time that early, continued and effective treatment of syphilis constitutes the only means of prevention which it plainly indicated. Fournier tells us that only 5 per cent. of paretics have gone

through an adequate course of treatment for syphilis. On the other hand, we are told of many instances in which general paralysis has followed the most efficient and intensive treatment. All references to this subject in the literature relate to events which happened before salvarsan had been added to our resources in the treatment of syphilis. The period which has elapsed between the general introduction of this remedy and the present time is shorter than the average period between infection with syphilis and the development of general paralysis. We are able now to judge of the efficiency of treatment by serological findings. With such resources at our command, we should be trifling with prevention in general paralysis if we failed to enter upon a vigorous campaign for treatment of all cases of syphilis.

The first step in such a program is to greatly extend our means of detecting syphilis. A "Wasserman survey" is planned for a large group of applicants for enlistment in the United States Army. We should make such a survey at once in the groups of the civil population which receive public support. It is absurd to record cranial measurements of men and boys in our prisons and reformatories and not ascertain by this simple means whether or not they have syphilis. Children should not be "placed out" until a negative Wasserman test has been obtained. The Health Department of New York City now furnishes outfits for collecting blood, and performs the test free. The State Department of Health should make this means of diagnosis available in every hamlet.

These are matters in which we are interested only as physicians and good citizens. There are, however, persons in the community with whom members of this association have especial contact. These are the relatives of the paretics in our public institutions. In at least three State hospitals the practice has been adopted of sending for the wives or husbands and children of patients with general paralysis, explaining the nature of the disease to them and having Wasserman tests performed without cost. The result has been the detection of a striking number of cases of syphilis. The superintendent of one hospital has made arrangements with a general hospital in the city so that such patients can be immediately treated. The practically unanimous willingness of the relatives of patients to have this test performed is not surprising, because it is a common occurrence when a person dies from tuberculosis for the relatives, although in perfect health, to request to have tests made to determine if they, too, are afflicted with the disease.

The chief obstacle to the treatment of known cases of syphilis is its cost. I know from personal observation that cases with contagious lesions of syphilis are turned away from one of the largest public hospitals in New York city if they are unable to pay for the treatment. In many other hospitals a single injection of salvarsan will be given free but the treatment discontinued

if patients are unable to pay. It is difficult to conceive of a more short-sighted policy than this. One man in nine who die between the ages of 40 and 60 dies from general paralysis, and yet the only means we have of preventing a person with syphilis from having this disease is deliberately withheld! The health authorities would permit no other communicable disease to be dealt with in this way. It seems that if the prevalence of such a frequent and fatal termination of syphilis as general paralysis were made generally known, a most important step would be taken toward changing this practice. I believe, however, that the only way in which we will be able to deal effectively with the problem of syphilis is to place it wholly in the hands of public health officials. I believe that the health departments of cities should take up this matter vigorously and require general hospitals to report all cases of syphilis applying for treatment, together with information as to whether the treatment was given or refused. Providing hospital accommodations for indigent cases of syphilis, at least during the period of active treatment with salvarsan, is as distinct a duty of the Health Department as it is to provide for cases of tuberculosis who are cared for under surroundings which tend to extend the infection to others.

The problem of general paralysis has been considered from the point of view of preventive medicine. I believe no more effectual way exists of dealing with it and the disease upon which it depends than to awaken the health officials of our cities and States to a responsibility which they have long neglected. You may search the publications of American State and city departments of health in vain for any reference to the importance of general paralysis or to its relation to syphilis. You will find dissertations upon pellagra (which caused no deaths in New York State during 1913) and upon leprosy (which caused one death). You will find pages devoted to smallpox (which caused one death), and you will find references to the latest work in tropical diseases, but you will find nothing about the great enemy to human life which we have been considering. Is it not time for psychiatrists to bring this important public health problem to the attention of public health officials?

ACETIC TINCTURE GENTIAN COMPOUND, A TRUE BITTER TONIC.*

By Albert N. Doerschuk,
President Kansas City Drug Club.

THE specimen presented herewith is an acetic tincture of gentian compound, of the U. S. P. drug strength, which has stood for over a year with no precipitation, and has the following proportion in each 100 parts: Gentian root, 10 parts; recent bitter orange peel

*Presented before Kansas City Drug Club.

to the equivalent of 4 parts of the dried peel; cardamon 1 part, as extractive carried in 6 per cent. acetic acid, with water sufficient to make 100 parts (no alcohol present), as against the official U. S. P. tincture of the same drug strength in 3 parts of alcohol to 2 of water. Here is also small quantity of the official hydro-alcoholic tincture, containing about 19 fluid ounces of alcohol to each quart. A tablespoonful of this three times a day is equivalent to giving a patient an average bar drink of whiskey three times a day as to alcoholic strength. The acetic acid present in the acetic tinctures is equivalent to the strength of the U. S. P. dilute acetic acid.

Acetic acid was slow to be recognized as a solvent for the active principles of organic drugs, but now the official fluid extracts of sanguinaria, squills and lobelia are entirely made with acetic-acid dilutions, and contain no alcohol, while nux vomica, ergot and conium are extracted with a hydro-acetic-alcoholic menstrum.

What appeals for favor in the acetic tincture of gentian compounds is its full, mellow and completely true aroma, and its distinctive bitter tonic taste, bringing out the marked characteristic of each drug and showing the root fully represented, much, no doubt, as in an extract of the freshly-found specimen, as against the alcoholic smell and burned taste of the official tincture. The glucoside, pectin and gentianose contained in the fresh root undergo oxidation in the presence of alcohol, and the aged alcoholic tincture is practically inert and worthless.

Acetic acid in itself has a marked food value, and is a refrigerant tonic promoting excretions. In this combination it has only a mild acid reaction, and develops no acetic ether. For all practical purposes, the acid used in manufacture is neutralized in the organic bases with which it combines in these drugs, and this tincture contains, in the form of acetates, the valuable organic salts of calcium, potassium, sodium, iron, etc., which are mostly left behind in the process for the alcoholic tincture. The acetic tincture must be considered as a completely available organic compound, with all the virtues of a mealtime cocktail, while the alcohol in the official preparation is held to be a necessary evil.

The alcohol habit is known to be the most pernicious form of spirituous intoxication, and commercial alcohol is known to be made from the coarsest and cheapest products that will ferment, and often from waste materials. Commercial alcohol is presumably 92.3 per cent. by weight of ethyl alcohol, and the other 7.7 per cent. are colorless by-products of the fermenting process—Who shall say of what usual composition? In prolonged internal medication with liquid organic drugs as usually constituted, a feature too often overlooked is the constant alcoholic stimulation experienced by the patient, with its accompanying reactions, and the effects of these by-products. Tincture gentian compound is thus often excluded in cases of stomach derangement where the drugs represented would be of the greatest benfit, but are forbidden by the alcohol carried.

This acetic tincture gentian compound recommends itself for continued use in large doses, and combines nicely in mixtures with other drugs. Gentian is an invaluable drug fallen largely into disuse because it has been abandoned in general practice. Acetic acid is now produced in a high state of purity at a nominal cost, and it is to be hoped that its medicinal and solvent virtues will become better known, and will bring acetic tinctures and extracts into general use.

Below is the formula for acetic tincture gentian compound:

Gentian root, in fine powder, 5 troy ounces.

Bitter orange peel, from the fresh fruit, in thin shavings and narrow shreds, cut with a bright knife, 5 troy ounces.

(This is equivalent to 2 troy ounces of dried peel.)

Cardamon seed, recently powdered, ½ troy ounce.

Ten per cent. acetic acid in distilled water, 50 fluid ounces.

Place all of above in a bottle, macerate for seven days in a warm place, with frequent shaking; express, avoiding contact with metal; wash the residue with 6 per cent. acetic acid sufficient to make the finished quantity measure 50 fluid ounces. Filter through coarsely-powdered charcoal previously well washed with dilute acetic acid. The 10 per cent. acetic acid originally added is neutralized to the extent of about 4 per cent., so that the finished product contains around 6 per cent. acetic acid.

Book Reviews.

AMBIDEXTERITY AND MENTAL CULTURE. By H. MacNaughton-Jones, M.D., M.Ch., Q.U.I., M.A.O.R.U.I. (Hon. Cau.), F.R.C.S.I. and Ed., Ex-University Professor, Queen's University, Ireland; Honorary Member of the Societies of Obstetrics and Gynecology, Leipzig, Munich and Rome; Ex-President of the Obstetric and Gynecological Section of the Royal Society of Medicine, the British Gynecological Society and the Irish Medical Schools and Graduates' Association. New York: Rebman Company. 1914. Cloth, 75 cents net.

This brochure of a hundred pages is devoted to the desirability of ambidexterity. The author urges the efficient use of both hands not only from the utilitarian standpoint, but also the cultural. He claims that a mass of evidence has been collected, which proves that the cultivation of ambidextrous exercises, both in art and writing, has a decided influence on the mind of the growing child, and that such psychophysical effort has a direct bearing on the child's character. At any rate, we are all prepared to admit that the free use of the left hand is an excellent mental training. Besides, no one is prepared to say at what time, through accident or disease, it may be necessary to depend upon the left hand. The arguments adduced by the author advocating the teaching of ambidexterity are sound and logical, and the lesson which he

wishes to impart timely. We wish that the book could be placed in the hands of all those having to do with the training of youth.

ON DREAMS. By Professor Dr. Sigm. Freud. Only Authorized English Translation. By M. D. Eder, from the Second German Edition. With an Introduction by W. Leslie Mackenzie, M.A., M.D., LL.D., Medical Member of the Local Government Board for Scotland; late Ferguson Scholar in Philosophy; late Examiner in Mental Philosophy, University of Aberdeen. New York: Rebman Company. 1914. Cloth, $1 net.

From dreams to mental morbidity is only a short step. It was Freud who first recognized similarity of dreams to mental disease. He found manifold analogies of dream life with the most diverse conditions of psychical disease in the waking state. It seemed, therefore, a priori, hopeful to apply to the interpretation of dreams methods of investigation which had been tested in psychopathological processes. Obsessions and those peculiar sensations of haunting dread remain as strange to normal consciousness as do dreams to our waking consciousness, their origin is as unknown to consciousness as is that of dreams. Experience has shown that a cure and a consequent mastery of the obsessing ideas did result when once those thoughts, the connecting links between the morbid ideas and the rest of the psychical content, were revealed, which were heretofore veiled from consciousness. This book is a translation of Freud's latest contributions to the study of the unconscious state. Freud maintains that there is a tendency in the mind to suppress every experience that is associated with painful emotion. At any rate, by some process the painful experience disappears from conscious memory, but it does not cease to exist. It may lie dormant or it may work subconsciously and throw up the emotional bubbles that continue, without a known reason, to excite the ordinary consciousness. Though deep and partly dormant, it never gets beyond reach. By concentration, by the following up of all clues offered by the ideas wrenched unwillingly out of the victim, the submerged complex, element by element can be brought back. This is then the method of psychoanalysis. It has been employed successfully in such varied conditions as hysteria, obsession, etc. Here we pass insensibly into the world of dreams. The morbid and the normal interweave. It is with dreams that the present volume is concerned; the interpretation of those awakened dormant complexes called dreams by the method of psychoanalysis. He attempts to prove that dreams are not a chaotic sport of the brain, but a manifestation of ordered mental experience. He theorizes that dreams are largely the expression of unfulfilled desires. In children by Freud's method it is easily deciphered, as the waking and sleeping experience differ very little from each other, the dream taking the form of the ungratified desires of the day. In adult life dreams are not so simple. In many instances they are too intricate to be deciphered

from direct memory. It is here that psychoanalysis comes into play. The part remembered gives the cue and the complex must be tracked back piecemeal by the remembered elements stirring up forgotten elements, thus bringing order out of chaos. According to Freud, this merely goes to prove that every dream is linked with some previous experience. Those interested in the study of neurology, especially the various psychoses, will find much of interest in this little book. Freud may not be entirely right in his deductions, according to the estimation of some. At any rate, there is a kernel of truth in his theory. Undoubtedly dreams are based on some actual experience, and the same statement applies to those delusions associated with the unbalanced mind. Though the book is out of the ordinary, it is written in such an elementary style that it can be read profitably not only by the profession, but also by the laity.

A Clinical Study of the Serous and Purulent Diseases of the Labyrinth. By Dr. Erich Ruttin, Privatdocent in the Otological Clinic, University of Vienna. With a Foreword by Professor Dr. Victor Urbantschitsch. Authorized Translation by Horace Newhart, A.B., M.D., Instructor in Otology, University of Minnesota; Otologist and Rhinologist, Northwestern Hospital; Fellow American Academy of Ophthalmology and Oto-Laryngology; Fellow American College of Surgeons, etc. With 25 Textual Figures. New York: Rebman & Co. 1914. Cloth, $2 net.

An intimate knowledge with diseases of the labyrinth is only a matter of the past few years. Indeed it can be truthfully said that a knowledge of the affections of this portion of the auditory apparatus is just beginning to be appreciated by the profession. Therefore those who are not familiar with the progress in the diagnosis and labyrinthine complications will find this book exceedingly helpful in recognizing and dealing with labyrinthine diseases. In its pages Dr. Ruttin presents a detailed description of the diseases of the labyrinth, in which the functional manifestations of the normal and diseased labyrinth, the different clinical aspects and the therapeutic considerations in each case are discussed.

Hospital of the Protestant Episcopal Church in Philadelphia. Medical and Surgical Reports of the Episcopal Hospital. Volume II. Edited by A. P. C. Ashhurst, M.D. 1914. Philadelphia: W. J. Dornan.

The 1914 volume opens with a short sketch of the Episcopal Hospital in 1888 and 1912, by E. J. Morris, M.D. Interspersed through the pages are a number of interesting papers and case reports by members of the staff.

MARYLAND MEDICAL JOURNAL

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BALTIMORE, NOVEMBER, 1914

THE TWENTY-FIFTH ANNIVERSARY OF THE JOHNS HOPKINS HOSPITAL.

THE twenty-fifth anniversary of the founding of the Johns Hopkins Hospital was celebrated with appropriate ceremonies during the week of October 5. Dinners, clinics and addresses by celebrated physicians and nurses were the order of the day; other important features of the celebration were the Herter series of lectures, delivered by Dr. Thomas Lewis of University College, London, and the unveiling of medallions to Dr. Hewetson and to the deceased resident physicians of the hospital. Here in Baltimore it is hard to realize the great influence wielded by the Hopkins in medicine throughout the country and abroad. Almost every field of medicine has been invaded by an indefatigable corps of enthusiastic scientists and made to yield its hidden secrets. As important as these discoveries have been, by no means the least contribution in the order of importance is the example of a great hospital run along scientific lines by scientific men. Every case is thoroughly studied and made to yield its quota to the sum total of medical knowledge. The methods of going over a case and recording the findings have to a large extent been copied by the hospitals of this country. But hardly does its influence stop here, for Europe, Asia, Australasia, South America and Africa have drunk at this font, and with benefit. It is to the South, however, that the Hopkins has been of the greatest inspiration. For since the advent of the Hopkins Southern medi-

cine has, so to speak, been rejuvenated until today it stands in the forefront of the times. This happy event has been accomplished by the example furnished by that industrious coterie of scientists working day in and day out purely for the love of science and the advancement of modern medicine to greater heights of usefulness. Every graduate of medicine in the South has consciously or unconsciously of necessity been influenced to greater efforts by this spirit and gone forth on his way with a determination to better prepare himself in his life-work, so that he not only will be abreast of his competitors, but also from professional pride. Though the medical school is not so old as the hospital, still they are so intimately connected that one can hardly be disassociated from the other. The two boards work hand in hand. From the very beginning they recognized the need of thoroughly educated men in medicine and insisted upon nothing less than a bachelor's degree as a prerequisite to the entrance upon the study of medicine. This was indeed an innovation in medicine, and the results have justified the opinion of the advocates. A new standard was thereby created, which today is being emulated by numerous institutions.

It has caused a quickening in medical education everywhere, and those institutions which have found it impossible to demand the same have at any rate advanced the entrance requirements to their schools. During the past twenty-five years there have been marvelous changes in medical education throughout the United States, and we in Baltimore can pride ourselves in the knowledge that the Johns Hopkins was the pioneer in this beneficent work. No longer is it possible for the ignorant and uneducated man to enter upon the study of medicine; no longer does any institution indulge haphazard methods. It is therefore fitting that the profession of Maryland, and especially of Baltimore, should congratulate the Hopkins upon the completion of its silver jubilee. As the mouthpiece of the Southern doctors, the Maryland Medical Journal extends to the Hopkins their felicitation upon the completion of twenty-five years of service to mankind.

Medical Items.

Dr. and Mrs. Thomas S. Cullen, who have been spending the summer at their camp on Lake Ahmic, Canada, have returned and opened their new home, 20 East Eager street.

Miss Amy MacMahon of Toronto, formerly of Johns Hopkins Hospital, has been appointed superintendent of the Canadian War Contingent Association Hospital arrangements. She is now at Shorncliffe, England, to organize the hospital there.

The annual convention of the American Association for Clinical Research will be held in Baltimore on November 5, 6 and 7. Physicians from all parts of the country will come to be present at the sessions, and arrangements are being made for the reception of more than 100 delegates.

There will be clinics at several Baltimore hospitals and the convention will close with a banquet and dance.

Dr. Leonard K. Hirshberg of this city was elected president of the organization at the last convention, held in Buffalo.

Dr. John N. MacKenzie has returned to his city home, 605 North Charles street.

Dr. and Mrs. J. Williams Lord have closed their home on the Severn River and have opened their city residence at 1011 North Charles street.

Dr. Theodore C. Janeway, successor to Dr. Lewellys F. Barker as head of the medical department at Johns Hopkins Medical School, assumed his duties on October 6, when the medical school opened for the year.

Dr. Janeway was formerly bard professor of medicine in Columbia University and director of the medical department of the Presbyterian Hospital, New York. He is a member of the board of scientific directors of the Rockefeller Institute for Medical Research and belongs to many medical organizations.

The Maryland Psychiatric Society and the Washington Society of Nervous and Mental Diseases held a joint meeting October 2 at Chestnut Lodge Sanitarium, Rockville. The program was most interesting and included a general discussion of paresis and tabes, opened by Dr. Sydney R. Miller, Baltimore, of the Phipps Psychiatric Clinic, followed by Drs. William Hough and William A. White of the Government Hospital, Washington; Dr. Adolph Meyer of the Phipps Clinic and Dr. Tom A. Williams of Washington. Dr. Ernest L. Bullard presided and Dr. William Rush Dunton, Jr., and Dr. John J. Madigan were secretaries, respectively, of the Maryland and Washington societies.

The Pine Bluff Sanatorium, located about two miles west of Salisbury, held its formal opening October 15. The institution is a State affair, under the supervision of a State commission, and is unique from the fact that it accepts patients only in their advanced and chronic stages of tuberculosis.

The committee on entertainment met the 100 or more visiting doctors and others in automobiles and took them to the institution, where Supt. Dr. George W. Todd and Head Nurse Mrs. Daisy C. Dorsey escorted the visitors through the buildings and over the 20 acres of ground situated on a high bluff overlooking the Wicomico River.

Special note was made by the visitors of the open-air treatment, which is given the patients in single apartments located on the grounds. Other special features were demonstrated by the superintendent.

A luncheon was served by the sunshine committee of Salisbury, under the supervision of Miss Louise Tilghman, its president.

The institution can accommodate at the present time about 40 patients, but are preparing within the next year to double that number. Dr. George W. Todd stated that any person in Maryland suffering with advanced or chronic tubercular trouble and without funds will be admitted to the institution upon the certification of a reliable physician.

The doctors present were: George W. Todd, Charles Laws, Berlin; R. E. Hall, Pocomoke City; J. McFadden Dick, John Elderdice, S. N. Pilchard, Harry C. Tull, H. W. Nickelson and D. B. Potter of Salisbury; A. A. Parker of Pocomoke City, Ebe Holland of Whaleyville, Wisehart of Snow Hill, Charles A. Holland, Whaleyville; James Bradshaw and Lynch of Delmar, Del.

Dr. J. H. Branham has retired from the office of second vice-president of the American Association of Obstetricians and Gynecologists.

The twenty-fifth anniversary of Johns Hopkins Hospital opened with a meeting at the Lyric on October 5. During the celebration an inspection of the Brady Urological Clinic, of which Dr. Hugh H. Young is director, was made. The clinic is the only one of its kind in this country and is a gift of Mr. James Buchanan Brady of New York. A portrait, by Sargeant, of Sir William Osler was pre-

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sented, and tablets to Dr. Daniel C. Gilman, president of the university and organizer of the hospital, and Dr. John Hewes ton were dedicated.

The home of Dr. Frederick H. Baetjer, Ingleside avenue near Edmondson avenue, Catonsville, was partially destroyed by fire on October 5. The loss, amounting to about $2000, was covered by insurance.

Dr. and Mrs. Baetjer went abroad last spring to study the hospital systems in different countries. When war was declared between Austria and Servia they were in Vienna. On August 29 they sailed from Naples, Italy, for home, and arrived in this country in September.

Sir William Osler, formerly dean of the Medical School of Johns Hopkins Hospital, Baltimore, and now Regius Professor of Medicine at Oxford University, has been appointed a colonel in the medical corps of the British army, and has been placed in charge of the hospital service at the front.

BIRTHS.

Recently to Leo J. Goldbach, M.D., University of Maryland Medical School, '05, and Mrs. Goldbach, of 2217 East Pratt street, Baltimore, a daughter—Julia Gertrude.

MARRIAGES.

Arthur J. Davies, M.D., Atlantic Medical College, Baltimore, '10, to Miss Hilda De Vries, both of Baltimore, Md., at Baltimore, September 22, 1914.

Walter Dent Wise, M.D., College of Physicians and Surgeons, '06, to Miss Agnes Gordon Whiting, both of Baltimore, at Baltimore, October 20, 1914. After a Southern wedding trip, Dr. and Mrs. Wise will occupy an apartment at the Walbert for the winter. Dr. Wise is assistant professor of surgery at the College of Physicians and Surgeons.

Firmadge King Nichols, M.D., Johns Hopkins Medical School, '10, to Miss Helen Marienne Spangler, both of Baltimore, Md., at Baltimore, October 24, 1914.

Howard E. Harman, M.D., College of Physicians and Surgeons, '11, of Leetonia, Ohio, to Miss Grace F. Burger of Baltimore, Md., at Baltimore, October 7, 1914. Dr. and Mrs. Harman will reside in Leetonia, where the groom is practicing.

Lawrence Tyler Post, M.D., Johns Hopkins Medical School, '13, of Baltimore, Md., to Miss Helen Sharp of Cranford, N. J., at Cranford, September 7, 1914. Dr. Post is an interne at the Johns Hopkins Hospital.

DEATHS.

George B. Reynolds, M.D., Washington University School of Medicine, Baltimore, '72, of 809 North Charles street, died suddenly of heart failure at the University Club, this city, October 2, 1914, aged 68 years.

Christopher F. Newbill, M.D., Physicians and Surgeons, '75, of Tappahannock, Va., died suddenly, while out for a drive, of heart trouble, September 26, 1914, aged 63 years. Dr. Newbill was one of the most prominent physicians of Norfolk for many years and health officer of that city.

Joseph E. Beatty, M.D., University of Maryland Medical School, '61, of Loch Raven, Md., died at a sanatorium outside of Baltimore, October 13, 1914, aged 75 years. Dr. Beatty was a regimental surgeon in the Civil War.

Shannon P. Peck, M.D., College of Physicians and Surgeons, '77, of Hinton, W. Va., a member of the West Virginia State Medical Association, died suddenly September 16, 1914, while driving with a friend in a motor car.

Wilber Gray Smith, M.D., University of Maryland Medical School, '80, died at his home in Oakland, Cal., August 6, 1914, aged 55 years.

John Franklin Mackley, M.D., College of Physicians and Surgeons, '82, of Fairfield, Pa., died at his home September 16, 1914, from heart disease, aged 59 years.

Robert W. Eanes, M.D., Washington University School of Medicine, '70, a Confederate veteran, died at his home in Eanes Cross Roads, Va., September 19, 1914, from nephritis, aged 68 years.

Leigh Seward Krake, M.D., Johns Hopkins Medical School, '14, of Plainview, Neb., died in the Johns Hopkins Hospital, July 9, 1914, from gangrene of the lung, aged 28 years.

Edwin Kindle Williams, M.D., College of Physicians and Surgeons, '83, of Arkadelphia, Ark., died at his home September 11, 1914, from pneumonia, aged 50 years.

Thomas Opie, M.D., University of Pennsylvania, '61, formerly of Martinsburg, W. Va., one of the founders of the College of Physicians and Surgeons, and for 33 years dean of that institution, died at the home of his daughter in Washington, D. C., October 4, 1914, aged 66 years.

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INTRA-ARTICULAR FRACTURE FIXATION, WITH REPORT OF TWO CASES.

By Nathan Winslow, A.M., M.D.,
Clinical Professor of Surgery in the University of Maryland.

The advisability as well as practicability of internal splintage in extra-articular fracture with bad position has been so definitely proven that it is needless to further dilate upon the subject. It is common knowledge. With intra-articular fracture, however, a different problem confronts us. Invariably the teaching has been that no foreign substance should be inserted—with the idea of permanency—in a joint. Sherman and Tait (*Surgery, Gynecology and Obstetrics,* August, 1914) have done some experimental work in intra-articular pegging in the dog and cat, and depict the results obtained with radiographs. They claim from an experimental point of view this procedure is perfectly warrantable in man. In June, 1913, a case of fracture through the head and anatomical neck of the humerus came into the service of Professor Randolph Winslow at the University Hospital, Baltimore, Md. As he was out of the city at the time, the patient fell into my hands. Suffice it at this time to say, finding it impossible to retain the fragments in apposition, a wire nail was driven directly through the articular surface into the shaft of the bone. Only recently, under like circumstances, a colored child with separation of the lower epiphysis of the humerus also came into my hands. Here a like procedure was pursued, save two very small wire nails were employed. In both instances, after incision and reposition it was found impossible to retain the fragments in apposition, and as the non-articular surface presenting in either instance was so slight that no space afforded a sufficient hold for a nail, the lesser evil to my mind was chosen, and nails driven directly through the articular surface of the bone rather than the obtainal of bad union with consequent faulty function, bearing in mind the ultimate removal of the nails if trouble arose.

In cases where fracture so upsets the joint surface that motion will be interfered with, or where reposition by other methods is inefficient, one must turn to the possibility of intra-articular splintage. The question naturally arises, Are screws, plates or

nails tolerated within a joint? Sherman and Tait have answered this question experimentally, and we believe we have done so practically. Our work was done absolutely independently of Sherman and Tait's, and was the result of the force of circumstances. In both instances the work was done before we had seen the article of the above-mentioned gentlemen. According to Tait and Sherman, in 1890 Charles Phelps of New York reported a series of cases of fractures of the patella treated by longitudinal ligation with silver wire. On the articular surface the wire was buried in a groove cut in the cartilage for its reception. Phelps stated, without clinical or post-mortem proof, that

Figure 1.—Before attempt at reduction. Lateral view.

the wire would be covered in and cause no subsequent trouble. These writers also state that a careful search of the literature fails to reveal other instances of intra-articular fixation appliances. Amongst others, from their experimental researches they arrive at the following interesting and instructive conclusions:

Screws and plates so used seem to be *per se* innocuous. Aside from the trauma incidental to their insertion, the reaction following the introduction of screws and plates does not differ from that caused by a foreign body in other connective tissues of the body. When properly countersunk they are rapidly excluded from the joint cavity by a layer of newly-formed fibrous tissue which grows up from the marrow spaces. Under aseptic conditions the ultimate fate of intra-articular metallic fixation appliances is

the same as that of extra-articular appliances. They remain firmly embedded. Even with slightly projecting intra-articular screws or plates, the function of the joint rapidly becomes normal. The direct wearing away of cartilage by an insufficiently countersunk screw-head does not lead to intra- or extra-articular deformities, except under faulty technical conditions.

Though they have never had occasion or opportunity to apply

Figure 2.—Before attempt at reduction. Antero-posterior view.

a screw or plate in man, they believe that even in the presence of trauma the replacement and maintenance of the replaced fragments or epiphyses by screws will give better results than by permitting the persistence of displacement with its consequent disability. They believe that the method of extending to intra-articular fracture the internal fixation apparatus used commonly in extra-articular fracture will, in properly selected cases, give the injured a more useful joint than the pursuance of the methods now in vogue. We believe that our work on man, which was

done without knowledge of the experimental work of Sherman and Tait, conclusively proves their contentions.

REPORT OF CASES.

P. M., aged 50, white, a native of Poland, but now a resident of Baltimore, tailor by trade and single, entered the University Hospital May 28, 1913. There was nothing in the family or previous history or physical examination of interest, save that the patient was suffering with a fracture at the upper end of the

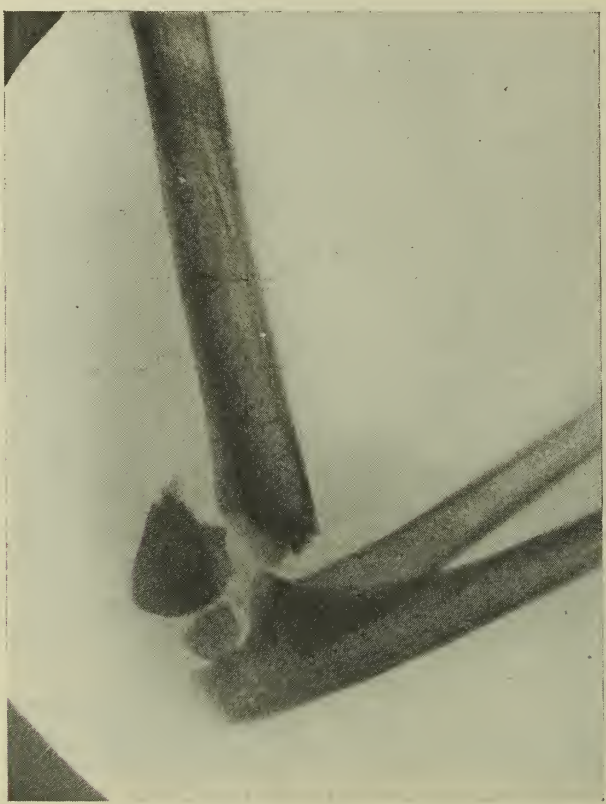

Figure 3.—Same as Figure 1. After attempt at reduction.

humerus. As he could speak but little English, it was utterly impossible to obtain much of a history except that the patient had fallen and injured his shoulder. After admittance to the hospital his arm was temporarily immobilized so as to permit swelling to subside. Later an attempt was made at reduction and the injured member put at rest in the Albee position. In order to ascertain the position and the extent of the fracture a skiagraph was made on June 19, 1913. The findings revealed a fracture through the head and the anatomical neck with bad position. As nothing

could be expected from external manipulation, on June 28, 1913, the patient was brought to operation, ether being the anesthetic. An incision was made midway between the acromium and coracoid process and extending about seven inches down the arm. The distal fragment was delivered through the incision. Then the head of the bone was sought out, separated from its capsule, and entirely delivered from the body. The fragments were next brought into apposition, but the upper fragment was so shattered

Figure 4.—Same as Figure 2. After attempt at reduction.

that it offered but little surface for plating. After some difficulty a very small plate was insecurely attached to the fragments, but it was immediately seen that the plating would prove ineffectual unless reinforced in some other way. No other surface presenting, a wire nail was passed through the articular surface into the shaft of the bone, the capsule sutured, the remaining wound closed and the arm encased in plaster. As the temperature of the patient was somewhat elevated and he complained of pain, the dressings were removed at the end of a week and the wound inspected. As there were indications of inflammation the silkworm gut sutures

were removed, when pus escaped. The temperature continued after this for some days to vary between 100 and 102 degrees F., pulse 110 and 120, respirations 20 and 24, but by the time of discharge from the hospital all had become normal. This inflammation finally resulted in sinus formation, the sinuses leading to the head of the bone. Gradually the sinuses, with the exception of one which discharged a straw-colored fluid, closed. In this condition the patient was discharged September 29, 1913, and directed to go to the dispensary for future dressings. On January

Figure 5.—Fragments reduced. Held in place by nails inserted intra-articularly.

12, 1914, the patient, as the sinus had failed to close, returned to the hospital. On January 14 Professor Randolph Winslow opened the previous incision to the bone and removed a plate with three screws. He then opened the capsule and disarticulated the head, but a careful search failed to reveal the head of the nail, so the sinus in the bone was enlarged and the nail grasped at its point by a pair of forceps and pulled out in a retrograde manner. The sinus was curetted and drained, the skin wound lightly closed.

The re-entrance note stated: The patient had no crepitus in the arm and good motion in all directions, save elevation. By the ninth day the sinus had closed. The patient was discharged January 30, 1914.

V. T.—This patient, colored, aged 3, is too young to give any history of the manner of receipt of injury, so we are unable to give a detailed history of the case, save to say that she entered the hospital August 3, 1914, and was subjected to a radiographic examination, which revealed a separation of the lower humeral epiphysis. On August 7, 1914, an attempt was made at reduction by hyperextension and flexion with the patient under ether

Figure 6.—End of nail projecting into shaft of bone from articular surface.

anesthesia, but, according to a second radiograph, with indifferent success. So on August 9, 1914, the patient was again anesthetized and an incision made over the olecranon process down to the bone, the fragments delivered after a great deal of trouble. As no surface presented extra-articularly through which nails could be passed, and the fragments not remaining in apposition when released, two small wire nails were passed from the articular surface through the epiphysis into the shaft. September 1, 1914, the patient is still in the hospital, but carrying her arm free of any immobilizing apparatus, this having been removed on the tenth day after the operation. At present there is some motion in the joint. According to the X-ray the nails were not sufficiently sunk, but we believe that the projection is not as great as the skiagraph

would lead one to believe. The highest temperature after operation recorded was 101.2 F., pulse 110, respiration 24.

It is as yet too early to prognosticate the ultimate functioning power of the elbow, but one can rest assured without operation function would have been materially interfered with.

We believe this work conclusively proves that intra-articular fractures which cannot be handled otherwise should be screwed or pegged from the articular surface; that the human joint tolerates a foreign body provided infection does not occur; that this method offers more prospect of a useful member than by leaving the fragments in bad alignment.

ROUND LIGAMENT SUSPENSION OF THE UTERUS—FIFTY-FIVE CASES.

By William Sisson Gardner, M.D.,

Professor of Gynecology, College of Physicians and Surgeons, Baltimore; Gynecologist to Mercy Hospital.

This paper is based upon the reports from 55 cases of retrodisplacement of the uterus that have been treated by round ligament suspension. A part of these suspensions were done after the method described by Gilliam, the remainder by bringing the round ligaments up through or near the inguinal canal. In all instances the round ligaments after being drawn up were attached to the fascia over the recti muscles. The cases that had other lesions that predominated over the retrodisplacement were omitted. The other lesions treated in connection with the correction of the displacement are noted.

The records were written by hospital internes, and are necessarily more or less incomplete, and no doubt more careful inquiry would have made some difference in the recorded symptoms, but they are sufficiently correct to give the important points in about their relative proportion.

The case of the longest standing was operated upon 12 years ago; the most recent one over one year ago. No cases have been included that have not been personally examined or been heard from within the past few months.

Of these patients, 42 had had one or more children; 13 were nullipara. In an estimation on a large number of cases made several years ago it was found that 25 per cent. of retrodisplacements occurred in women who had not borne children. In the present series very nearly the same proportion is preserved.

Thirty-six patients complained of pain at the menstrual period. In 17 of the 36 cases the pain was an increase of their general backache and pelvic pain that they suffered from more or less between periods. In the other 19 cases the pain was of a different character. It was a sharp, severe pain, beginning from one day to one

week before the flow, usually continuing throughout the flow, and in a few instances recurring after the flow.

Twenty-one patients had severe occipital headache just before or during the menstrual period.

There was an increase in the loss of blood at the menstrual period in 19 patients. This increase is commonly a prolongation of the period and a relatively small daily increase in quantity, the total amount of blood lost during the menstrual period being considerably more than normal, but no profuse hemorrhage. In 18 cases the menses were irregular. In a few instances the periods came farther apart than normal, but in most instances the periods were less than 28 days apart.

Thirty-seven patients had backache and 30 had pain in the pelvis. Only one patient complained of severe intermenstrual pain.

Twenty-two of these patients were markedly constipated. It is well known that in a small percentage of retrodisplacements, the enlarged displaced uterus causes mechanical constipation by pressure upon the rectum. No doubt the vast majority of cases of constipation associated with retrodisplacements have no direct relation to the retrodisplacement.

The records show that 15 of these patients complained of poor appetites. One of them was nauseated when on her feet. Another one became nauseated at each menstrual period. The patient who became nauseated when on her feet had both ovaries prolapsed.

Micturition was frequent in 16 of these patients, and the pain with micturition occurred only five times. The frequent micturition in most cases of retrodisplacement is due to the pressure of the base of the bladder against the symphisis by the cervix. This symptom disappears promptly when the pressure is relieved.

As was stated in the earlier part of this paper, only those cases are included in this list in which retrodisplacement was considered the predominant lesion, but in addition to suspension, the following supplementary operations were performed:

Laceration of the cervix, repaired, 3 cases; laceration of the perineum, repaired, 17 cases. The uterus was dilated and curetted 20 times. In 15 cases, one or both ovaries were suspended. In 4 cases, one ovary was removed. Both tubes were removed in one case. The appendix was removed in 12 cases. There was one case of ventral hernia, and one relaxed anterior vaginal wall repaired.

Of these patients, 41 were entirely relieved. In six of the cases the uterus remained in position, but the symptoms were not relieved. In six cases there were marked improvement, but not entire relief. In two patients the symptoms were not improved, but it is not known whether the uterus remained in position or not. In not a single instance where the patient has been examined again has the uterus been found out of position.

The six patients who have been examined and the uterus was

found in good position, but the patients were still having trouble, form an interesting group and deserve more than passing attention.

Patient No. 2267 was a small, badly-nourished, overworked neurotic woman. She had a retrodisplacement, but was advised at the time that the correction of the displacement was only an incident in her treatment, and that what she needed was a thorough rest cure. As soon as she could get on her feet after the operation she left the hospital. Since then she has not followed the course advised and has never become strong.

Patient No. 1882 returned a little over a year after her suspension, and stated that she was menstruating every two and a half to three weeks. The flow was scanty, but very painful. The pain continued about one week. Between periods there was a great amount of pelvic pain. She also complained of trouble with her rectum, vagina, and a pain in the left side. Physical examination showed the uterus to be in a normal position, but it was tender on pressure. A course of local and general treatment extending over a period of two months gave no relief. At the end of that time a supra-vaginal hysterectomy was done, since which time she has been quite comfortable.

In 1905, patient No. 593 had her perineum repaired, both ovaries suspended and the round ligaments shortened. In 1906 she had recurrent attacks of very severe pelvic pain. The left ovary was found to have become very much enlarged, and was removed. Pains having recurred again in 1909, a supravaginal hysterectomy was done, since which time the patient has been comfortable. At this operation the uterus was found to be in a good position, slightly enlarged, but there were no adhesions and nothing was found to account for the very severe attacks of pains from which she had suffered.

Patients No. 2082, No. 1820 and No. 1727 all have the uterus retained in good position, but their complaints have not been materially relieved.

Whenever the diagnosis of retrodisplacement of the uterus is made, the question as to the method of its treatment follows immediately. While it is true that an occasional retrodisplacement is seen that gives rise to few, if any, symptoms, the great majority of them cause so much discomfort that the patients must be given relief.

Many of them can be relieved temporarily and a few of them permanently by the use of a pessary. The pessary is the most useful in cases of acquired retrodisplacements where the pelvic floor is intact and the treatment is begun soon after the displacement has occurred. In acquired retrodisplacements of long standing and in congenital retrodisplacements the pessary is of very little value. An occasional case in either of these groups may derive some benefit, but in the vast majority of them the pessary is useless. It, of course, follows that in cases where the pelvic diaphragm is defective, either from injury or from failure in development, that the pessary cannot be used to advantage. In a consider-

able percentage of cases in which the pessary apparently gives relief, this relief is only temporary, because the relaxation of the vaginal outlet has a tendency to increase with age, so the support that the pessary must have becomes more defective, until such a time arrives that the pessary can no longer be retained.

In my experience the pessary is almost useless in retrodisplacements in nullipara. In a few of them the uterus can be kept in position, but the symptoms do not disappear. This condition is well illustrated by No. 1970. She was a young married woman who came to me on account of sterility and an exceptionally severe dysmenorrhea. For five months I endeavored to relieve her without resorting to an operation. The uterus could be kept in position, but the dysmenorrhea grew worse. In March, 1911, one ovary was resected and both ovaries were suspended and the round ligaments of the uterus shortened. Her dysmenorrhea was entirely relieved, and within a year she became pregnant.

In all these cases which cannot be relieved by the pessary it is necessary to resort to some operative procedure.

Many operations to replace the uterus and secure it in the correct position have been devised. The operation of ventral suspension, which was introduced in this country by Dr. Kelly, was very popular for a number of years, and a very large number of them were done by many operators. The frequent failure to retain the uterus in position, the occurrence of the ventral fixation in place of the intended suspension, and the complications during pregnancy and labor in patients upon whom this operation had been done have caused it to be abandoned by nearly all surgeons.

Among the various round ligament suspension operations that are most widely done are the Baldy-Webster operation and the Gilliam operation or some modification of the latter. Polak reports that out of 376 cases operated upon by the Baldy-Webster method, in 32 cases the uterus has relapsed and was found retroverted and prolapsed, carrying the ovaries with it. Ten have lateral version of the uterus and complain of pain in the side toward which the fundus is turned. Sixteen have prolapsed cystic ovaries. Twenty-six have had thrombosis of the pelvic veins, which has extended to the femoral and saphenous, which gives a morbidity larger than he has had from any other intra-abdominal operation.

In conclusion, Polak states that the Baldy-Webster operation has a definite field of usefulness in properly-selected cases of retrodeviation of the uterus when intra-abdominal shortening of the round ligaments is employed. It should not be selected for heavy uteri with the cervix in the axis of the vagina. Its success depends on a small uterus, a cervix pointing backward, equally developed ligaments and a careful technic.

In the Gilliam operation the abdomen is opened by a short median incision just above the pubis. The fat and skin are dissected off the sheaths of the recti muscles on both sides. A small opening is then made directly through the rectus muscle on each side of the abdominal incision, and a loop of the corresponding

round ligament is drawn up through this opening and stitched to the fascia of the rectus. The shortening of the round ligaments by this method pulls the fundus of the uterus upward and forward. It has the defect of leaving artificial pillars extending from the uterus to the abdominal wall, and the traction on the uterus is not in the normal line of the round ligaments.

A slight modification of this operation obviates both of these objections. If the lateral dissection is carried beyond the outer border of the rectus muscle a curved mouth-toothed forceps can be inserted through the inguinal canal and carried down beneath the peritoneum to a point near that portion of the round ligament that is to be brought up. The forceps are then made to puncture the peritoneum and the round ligament is grasped about one and a half inches from the uterus and the forceps is withdrawn, bringing with it a loop of the ligament, which is stitched to the fascia in such a way as to firmly fix the round ligament in this position and to close the opening made in the fascia by the forceps. The same procedure is carried out on the other side.

By this method the traction on the uterus by the round ligaments is very much more nearly in the normal line of the round ligaments and no artificial pillars are left in the abdominal cavity. There is no interference with the circulation in the broad ligaments, and there are no intra-abdominal stitches or other traumatisms to favor the formation of adhesions.

No. 6 W. Preston Street.

The Clinics of John B. Murphy, M.D., at Mercy Hospital, Chicago. August, 1914. Published Bi-Monthly. Philadelphia and London: W. P. Saunders Company. Baltimore: The Medical Standard Book Co. Paper, $8 per year.

Everybody is now familiar with Murphy's Clinics, or at any rate should be. It is therefore needless for us to enter into long encomiums. Suffice it to say, each issue has so far proved its usefulness as well as helpfulness. The present number should be no exception. Here, as heretofore, surgery of the bone enters largely into the makeup. Yet one cannot too often be impressed with what can be done for those individuals suffering with ankylosed joints and ununited fractures. Constant repetition drives the lesson home, and one is less likely to forget when confronted with those conditions if he is thoroughly conversant with Murphy's methods. Do not get the idea, however, that there is nothing else in the volume, for such is not the case, as there are instructive articles on intrauterine fibroids with hysterectomy, cerebellar tumor with decompression, malignant papillomatous cyst of the breast, differential diagnosis and operation.

SOME REMARKS, WITH ILLUSTRATIVE CASES, CONCERNING THE PATHOGENESIS OF CERTAIN NEURALGIAS IN RELATION TO INFLAMMATION, TOXICOSIS AND NEUROSIS.

By Tom A. Williams, M.B., C.M., Edin.; Washington, D. C.
Prest. Wash. Soc. Neu. and Ment. Dis.; Corres. Mem. Soc. de Neurol., Paris, etc.

A WOMAN of 57 was referred by Dr. Thomas Charles Martin in June, 1914, on account of intermittent neuralgia of the right side of her face. The pain began in the right lip, eye and temple, later extending to the ramus. It was aggravated by damp. She is a woman of nervous temperament, and sleeps poorly, and has had renal and bilary cholic for 30 years until relieved by operation nearly three years before.

In 1912 she had an attack of right upper thoracic zona without sequelae. Six months ago she had acute laryngitis while in Boston, and a pharyngitis later while in Philadelphia, to which she is subject when there. For two years the right lower third molar has been treated by her Boston dentist. Recently a return of hepatic colic has required modification of her diet at the hands of her physicians in Philadelphia, who have forbidden fried and red meat, strawberries, eggplant, rhubarb, etc., but who have not interfered with a somewhat excessive consumption of protein. However, she showed no signs of faulty metabolism, and her blood pressure was 124, the diastolic being 84, with a small soft artery.

The reflexes were of the active kind.

The sensibility was normal, save for a hyperesthesia to vibration and pin over the right face and neck.

The muscles were firm.

Diagnosis.—On account of the hyperesthesia and its location, I expressed the opinion that this was a neuralgia of dental origin; but the patient was reluctant to believe this, as her Boston dentist had assured her that her condition could not proceed from the teeth. However, she consented to see Dr. Anderson in Washington.

He at once found an abscess at the root of the third molar. To this he attended, and within three weeks the neuralgia disappeared.

At the same time, the protein of the patient's diet was diminished, and she was given advice to protect her from well-meaning friends and relatives who always were tormenting her with advice to rest because of their fear of a breakdown, due to their misunderstanding of the nature of her nervousness, which was merely a manner of reaction of an intensely energetic temperament in a woman of unusual balance and capacity.

CASE II.—A woman of 40 complained of an intense neuralgia in the gum whenever hot or cold food came in contact with it. The

pain following this was sometimes so intense as to incapacitate her, and as she was a valuable employe, her employer wished her to be cured if possible. Her health had been otherwise good, but she was excessively stout, and her blood pressure had been 160. There were no abnormal physical signs, except at the site of the neuralgic gum, where a tenderness was revealed by pressing a scar tissue where the teeth had been removed.

Diagnosis.—This led me to the opinion that an inflammatory condition of the nerve endings in the scar tissue was responsible for the neuralgia, and I sent the patient to Dr. Anderson, who completely relieved her by building a protective ridge over the bare gum.

At the same time, the condition which led to the hypertension and adiposity was met by an appropriate dietary and exercises, which within a month reduced the blood pressure below 140.

The advisability of the latter treatment is on account of the belief that the toxic condition induced by hyperproteosis greatly aggravates the local irritation of peripheral nerves by inflammation or trauma. Everyone who has experienced a chronic abscess at the root of a tooth knows how the pain varies in correspondence with his general condition. The influence of the atmosphere is believed to be exerted in this way by altering heat radiation and conduction, and by interfering with the carbon dioxide diffusion in respiration, thereby modifying the metabolism. Where trauma is concerned the confessions of the bearers of amputation stumps and sufferers from ligmentous strain tell the same story. Whether the pain is due to a species of histological gout, an actual deposition of irritating materials in the tissues, or whether it is caused by a contraction of the arterioles altering the osmotic condition of the part is problematical. But that the pains occur and that they are relieved by such tissue stimuli as massage and alterations of temperature induced by water or electricity is highly significant.

I am not here considering the remote aponeurotic, arthritic and neuritic pains caused by the diffusion of a septic toxin absorbed from a circumscribed focus elsewhere; for exogenous toxins are not in question in the chronic neuralgias which we are discussing now.

Whether toxic absorption played any part in the case which follows seems also doubtful to me. It seems to belong to the class of cases once thought very common, but now believed quite unusual, where the persistent irritation of a peripheral nerve leads to the diffusion of its stimulus to remote portions of the nervous system with the causation of clinical syndromes labeled neurotic.

AN "OCCUPATIONAL NEUROSIS" CAUSED BY TOOTHACHE.

A married man in the Federal Forest Service had for some years done much office work, entailing the responsible control of other men. He was brought to me because he had suddenly begun to vacillate concerning administrative decisions. From his wife and

children finding it necessary to remain in the West while he was in Washington, he denied any disturbance. But the fact remained that he contemplated going to them on a long vacation, as his work was more than he could stand. For a few days he had developed a severe neuralgia, paroxysmal in nature, but not due to faulty teeth according to a dentist. Examination was negative, and I attributed his condition to the metabolic disturbance caused by prolonged stress, worry and unhabitual sedentariness. I advised a trial of low nitrogen diet, active exercise and freedom from work for a few days. However, the pain became so acute that the patient insisted upon extraction of the most painful tooth. Forthwith all his unpleasant symptoms disappeared. The patient declared that he felt as if a huge incubus had suddenly been removed. He immediately returned to work without further trouble.

This was clearly a case of peripheral nagging, prevetning the harmonious integration of the nervous system needed for psychological adaptation. It had etiologically nothing to do with occupation as such.

CONCERNING "REFLEX IRRITATION" AND NEUROSES.

At one time tremendous emphasis was laid upon the irritation of the nerve terminals as a source of neurasthenia, hysteria and neuroticism in general. Innumerable turbinates have been shaved, appendages removed and errors of refraction corrected on account of this notion. But extended experience has convinced even the most ardent specialist in rhinology, gynecology and ophthalmology, when they are possessed of scientific honesty and clear-mindedness, that comparatively few neurotic cases arise from purely reflex irritation.

There is still, however, much confusion as to the genesis of the psychoneuroses. The source of this confusion lies in the want of clear differentiation between symptoms referable to the autonomic nerves and those which often so closely resemble them, although originating psychically. A few examples will make this clear.

The abnormal frequency of micturition in the earlier period of gestation has its source, in all probability, in the stimulation of the afferent nerves from the neck of the bladder on account of the stretching of the tissues around the utervesical pouch by the rapidly expanding uterus. Any impulse passing by this tract is necessarily interpreted as an irritation of the mucous membrane by urine, which experience has taught us to associate with need for micturition. There is really an illusion, comparable to that in one's toes when the nerves are stimulated in the stump of an amputated leg or in the more familiar "funny bone" experience or in referred pain.

Now the sensations derived from these are totally unamenable to psychic influences, although, of course, the patient's response to the sensations is modifiable by the will.

Very different is the case of the nocturnal incontinence of chil-

dren, perhaps one of the most typical of the misunderstandings of the theorem now being illustrated. This affection is purely psychogenetic; for it is due to a failure to educate the cortical inhibition so that it may maintain itself during the relaxation of sleep.

In connection with this, there is another common misapprehension that during sleep consciousness is suspended. That is not the case, as innumerable examples prove. Only two of these need be cited. One is the power which many people possess of appreciating the lapse of time while they are asleep. They can approximately judge the hour when they awake accidentally during the night, and can determine in advance the hour at which they should wake in the morning. Another series of facts shows that we are not even insensible to peripheral stimulation during sleep. For instance, by stimulation of the skin, muscles or special senses the contents of dreams can be determined; not only that, but direct ideas can be inculcated in speech, and a psychotherapeutic method has been based upon this fact, especially in childhood; indeed, it has been particularly applied to incontinence of urine, on account of the supposed efficacy of what its exponents are pleased to call the "subconscious." We need invoke no such hypothesis: for suggestion during sleep, hypnosis or any other "passive" state is more effective merely because the idea invoked then dominates the field of consciousness uninterrupted by other extraneous stimulations; hence it is more easy to gain the attention and make an idea penetrate in these states; but the technical skill which we call persuasive power is capable of doing the same with the subject in no matter what state. The problem is merely one of fixing an idea in the patient's mind, so that it may energise toward the desired end. The art of doing so is psychotherapy; but it is only proper and is most successful when based upon clear diagnosis. This is only possible after a study of the patient by the methods of clinical neurology, which enable us to comprehend the psychogenesis of the disorder by unraveling its mechanism.

1705 N Street N. W.

THE PASTEURIZATION OF MILK.

By Asa B. Gardiner.

The man who sells milk has been very much interested in the attitude of the medical profession toward milk pasteurization. The modern milkman is fully posted on all details of milk. Nearly every large dairyman has his own laboratory; the management is fully posted as to the medical side of the milk question as it is of the legal and the business side. Its library collects all information and they will usually be found to be up to the times.

Low-temperature pasteurization of milk, that is, 145 degrees for 30 minutes, is one of the most successful food safeguards that

has been discovered in the last 20 years, and milk pasteurization today would not be as general and its results would not be as beneficial to the general public if the milkman had not continued his fight for pasteurization in the face of the medical profession, who talked ricketts and all kinds of other trouble; in the face of boards of health, who claimed that pasteurization was a cloak only for bad milk, and even today the true facts regarding milk pasteurization seem to be little known or understood among the medical fraternity at large.

First, the distinction between pasteurization and sterilization does not seem to be understood.

As accepted in this country, 185 degrees for three minutes is a high limit of pasteurization and has been discarded because at 175 degrees the salts are affected, at 167 degrees the taste is that of scorched milk, at 165 degrees the albumen is changed and the enzymes are also changed, and at 155 degrees its cream line is wiped out and the cream no longer rises. All these things go to show that at this heat the chemical composition, the taste and the digestibility of the milk is affected. At 145 degrees for 30 minutes not one of these bad effects are noticed, nor is any other, and the digestibility remains the same as with raw milk, but at this temperature and for this time (and this has been demonstrated time and time again without question) all the pathogenic germs have been killed. Typhoid, diphtheria, streptococci, tuberculosis and colon baccillus have all been destroyed. On the other hand, many of the beneficial lactic acid germs survive this time and temperature, and, following pasteurization, lack of care of the milk and age is shown by the milk souring, a safe result rather than the danger of putrefaction.

Sterilization of milk, that is a temperature of 212 degrees for two or more minutes, is evidently worse in its effects than the temperature of 185 degrees.

Today the proper pasteurization of milk and the need for it has been recognized by the cities of New York, Boston, Chicago, Philadelphia and St. Louis, and the improvement in the health of the children and in the general health of the people has been distinctly shown as a result of such ordinances.

PYLOROSPASM IN AN INFANT.

By Wm. T. Watson, M.D.

BABY M——— weighed 9 pounds at birth. Was fed at the breast with the exception of one or two feedings daily. Throve well up to the end of the second week, when it vomited the breast milk after nearly every feeding. I saw it when three weeks old and after vomiting had continued one week. It then weighed the same as at birth—9 pounds. The food came up with considerable force but with no apparent discomfort to the infant. Small dome-

shaped waves of peristalsis could be seen emerging from the left costal margin and passing to the right of the median line. Before one wave had faded out another was on the way. On the first day I saw it only two of eight feedings were vomited. The next day only three feedings were retained. The majority of feedings continued to come up. At four weeks the weight was 8 pounds; at five weeks, 7 pounds, where it remained for a little over two weeks, and then slowly began to rise. When three months old it had reached its weight at birth, viz., 9 pounds. At eight months of age it was strong and well, weighing 18 pounds.

As the baby got thinner the peristalsis became more evident and could be seen several feet away. The pylorus was not palpable. At no time was the baby cross or uncomfortable.

This was my first case, so I went to my books, where I got very little comfort.

Rotch, quoting Monnier, said the cases not operated upon show a mortality of 80 per cent. The mortality percentage in the cases operated on is about 47.7 per cent.

Holt said: "After a positive diagnosis has been made the question of operation must be considered. It is held by many that operation is absolutely contra-indicated on account of its great attendant dangers, and as most cases recover without it. General experience, however, is opposed to this view. If careful and intelligent treatment produces no improvement, and vomiting continues until life is threatened, surgery holds out some hope of relief, though a slender one. Cases apparently hopeless have been rescued by operation. The greatest judgment is necessary not to continue the expectant treatment too long, and thus allow the child to become so wasted and exhausted that operation is inadmissible. About *one-fourth of the cases operated* on thus far have recovered."

Kerley said: "The only treatment, in the great majority of instances, is operation, with the outlook not promising."

Then I turned to recent medical literature and found the following comforting abstract in the *Jour. A. M. A.* of Jan. 15, 1910:

"Bendix: 'Treatment of spasm and stenosis of the pylorus in infants.'—Bendix regards these affections as pertaining exclusively to the domain of the internist, with breast milk as the main reliance. After a day on which nothing but water is allowed he lets the infant nurse at will; but if vomiting is very frequent and copious he restricts the amount and increases the number of feedings. From *six to eight weeks may pass before distinct improvement becomes evident, and the physician must be firm and not let himself be dissuaded from breast-milk feeding,* supplementing the child's nursing possibly by rectal enemas of breast milk, from 50 to 150 gm., several times a day. He lays great stress further on supplying fluids freely to the child to prevent water starvation. He does not approve of lavage of the stomach except possibly once at the beginning of treatment; it is liable to induce severe collapse. Moist heat to the stomach region, especially before

meals, frequent warm baths, and small doses of opium and valerian or an alkali are the main reliance. *He has never had to call in a surgeon, finding that a turn for the better occurred* INVARIABLY *by the end of the fifth or sixth week.* The first sign of improvement is when the child ceases to lose weight."

Knowing the excellent standing of Bendix as a pediatrist of large experience, I decided to take his advice and not consider surgery.

A minute hot-water bag was kept over the stomach.

A dose of codeia was given 10 minutes before feedings.

The feedings were small and close together.

Breast milk was used principally, but at the solicitation of the mother malted milk and condensed milk were tried, only to be discarded.

The introduction of fluid by the Murphy method was impossible. The attempt only showed what a wriggling thing even an unusually passive baby is.

Of course I am not going to draw too big a conclusion from one case. So far as it goes, however, it confirms rather than opposes Dr. Bendix's assertion that "Spasm and stenosis of the pylorus in infants pertains exclusively to the domain of the internist."

Correspondence.

Editor the Maryland Medical Journal,
Professional Building, Baltimore, Md.:

Dear Sir—Will you be kind enough to insert the following notice in an early issue of your JOURNAL?

"My statement appearing on page 220 of this JOURNAL (September, 1913), that 'infection has occurred at least twice,' was based upon a report which on further investigation appears to be without foundation." (Signed) CHAS. C. W. JUDD.

Book Reviews.

ELECTRICITY IN DISEASES OF THE EYE, EAR, NOSE AND THROAT. With illustrations. By W. Franklin Coleman, M.D., M.R.C.S., England; Ex-President of and Professor of Opthalmology in the Post-Graduate Medical School, Chicago; Ex-President of the Ophthalmological Society of Chicago; Professor of Ophthalmology in the Illinois School of Electro-Therapeutics, Chicago, etc. The Courier-Herald Press. 1912. Cloth, $5 net.

This book is indeed welcome, as it goes thoroughly into every aspect of electricity as applied to diseases of the eye, ear, nose and throat. Many practitioners have been using electricity in a harum-scarum sort of a way, but without an exact idea as to what sort of a current to use, and how. It is this aspect of the book that par-

ticularly attracts, us, the writer not only advising the use of this or that form of electricity, but thoroughly describing how the form used acts. The volume encompasses the physics of electricity, the therapeutic use of electricity and the technic of its application, electricity in diseases of the eye, ear, nose and throat. Undoubtedly electricity is destined to play an important part in the cure of disease, but to accomplish the most good it must be used intelligently. Throughout the volume one is impressed with the absolute mastery of the author over his subject as illustrated by the numerous cases reported, the exact technic employed and the good results obtained. To one who is a believer in the efficacy of this agent the present volume, owing to the paucity of literature on medical electricity, is indeed a gratifying addition to the literature, especially so as it is so complete and withal personal. Some of the results obtained by the writer are certainly remarkable, but no less so than those obtained by other devotees to electricity. As the administration of electricity during the past few years has taken so many forms, all of which are treated tersely and plainly in the present volume, should make the book sought after not only by the specialist in diseases of the eye, ear, nose and throat, but also general practitioner.

ANOCI-ASSOCIATION. By George W. Crile, M.D., Professor of Surgery, School of Medicine, Western Reserve University; Visiting Surgeon to the Lakeside Hospital, Cleveland; and William E. Lower, M.D., Associate Professor of Genito-Urinary Surgery, School of Medicine, Western Reserve University; Associate Surgeon to the Lakeside Hospital, Cleveland. Edited by Amy F. Rowland. Illustrated. Philadelphia and London: W. B. Sanders Company. Baltimore: The Medical Standard Book Co. Cloth, $3 net. 1914.

This is one of the most important monographs which have recently appeared. In it are embodied the investigations of Dr. Crile on the harmful influences arising during operation and the methods of their combattal. For many years Dr. Crile has been endeavoring to solve the operative technic with the least amount of shock to the patient. After trying one agent after another he finally discovered that nervous traumata were carried to the central nervous system during operation, which traumata, if of sufficient intensity, would produce shock. In order to short-circuit these insults he, amongst other means, injects cocaine into the skin befor incising, also the large nerves before cutting them. He states the ideal treatment for surgical shock is the direct transfusion of blood. His conclusions are based entirely on the kinetic theory of shock, namely, an insult to the body is repulsed by the automatic discharge of nervous energy either through ontogenetic or phylogenetic association. The monograph is an elaboration of this theory as applied to shock, with experimental and clinical experiences adduced as proof. According to this theory, all forms of shock

are caused by overstimulation and consequent exhaustion; that the cells of the brain, the suprarenals and liver show physical changes corresponding to each change in the clinical cycle of shock; that each shock-producing agency causes in the cells of the brain a hyperchromatic stage, followed by a hypochromatic stage. The organs of the body especially involved in shock are certain organs whose function is that of converting latent energy into kinetic energy in response to adaptive stimulation. These organs are the brain, thyroid, suprarenals, liver and muscles. In response to environmental stimuli of any sort these organs convert latent energy into motion or into heat. He illustrates by picture the changes in the brain cells which ensue as a result of shock, no matter what the agency, insomnia, over-drug stimulation, trauma, or what not. The book is certainly a testimonial to quiet, persistent, patient, scientific investigation, and the proof adduced certainly is strong enough to substantiate the author's claims.

The Traumatic Neurosis. (*The American Journal of The Medical Sciences, October,* 1914.) By Tom A. Williams, M.B., C.M., Edin., Washington, D. C., Pres. Wash. Soc. Nerv. and Ment. Dis., Corres. Mem. Soc. De Neurol., Paris, etc.

Of this misnomer the cause is shown to be merely psychic, derived from a false notion of the patient which induces depressing emotions, which disturb both the bodily health and life relation. A clear illustration of the mechanism is that of the "conditioning" of the gastric reflex of dogs by psychological stimuli, whether these are pleasurable or painful. The removal of the extraneous suggestion would remedy the neurosis but for the fact that memory maintains its action. So that the mental content must be modified at its foundation, and this requires considerable analysis of the patient's trends. Hence the complete failure of such naive procedures as reassurance and suggestion.

Lawsuits and malingering, so often interwoven with these cases, have created misunderstandings. But indemnity is not necessarily curative even of the malingerer. A case which lasted seven years after receiving heavy damages is reported.

In the complicated case, proper psychological reconstruction, made possible by clear analysis, inevitably cures, as the mechanism of neurotic disturbances after accidents differs in no way from that we find when there has been no accident at all. Furthermore, its nature is not of a complexity beyond the understanding of a layman, so that its principles can readily be grasped when presented in court by an expert witness who really understands them.

THE PRACTICE OF SURGERY. By James Gregory Mumford, M.D., Lecturer on Surgery in Harvard University; Surgeon to the Clifton Springs (N. Y.) Hospital; Fellow of the American Surgical Association; Recently Visiting Surgeon to the Massachusetts General Hospital, etc. With 683 illustrations. Second edition, thoroughly revised. Philadelphia and London: W. P. Saunders Company. Baltimore: The Medical Standard Book Co. 1914. Cloth, $7 net.

The second edition of Mumford's Surgery is, if anything, more complete than its predecessor. One thing which struck us particularly is the frankness of statement. You may not agree with what the author says, but at the same time you are willing to concede that he is absolutely convinced that he is telling the truth. The illustrations are well selected, numerous and admirably adapted to the text. We were somewhat disappointed that there were no Roentgengrams illustrating the sections on fracture and dislocation. In our opinion, such illustrations would have increased the usefulness of the text. Taken all in all, it is one of the best general textbooks on surgery on the market, and one will not go wrong in purchasing it when contemplating the acquisition of a thoroughly reliable book on general surgical topics. Of course, covering such a wide field, some topics must of necessity be touched on lightly. However, the author has exhibited good judgment in amplifying those subjects whose importance demand more than passing notice and passing over with few words the subjects of lesser importance. It is thoroughly reliable, dependable and abreast of the times.

A TEXTBOOK OF MEDICAL DIAGNOSIS. By James M. Anders, M.D., Ph.D., LL.D.; Professor of the Theory and Practice of Medicine and of Clinical Medicine, Medico-Chirurgical College of Philadelphia; Officer De L'Instruction Publique, etc., etc., and L. Napoleon Boston, A.M., M.D., Professor of Physical Diagnosis, Medico-Chirurgical College; Physician to the Philadelphia General Hospital; Pathologist to the Frankfort Hospital. Second edition, thoroughly revised, with 500 illustrations, some of them in colors. Philadelphia and London: W. B. Saunders Company. Baltimore: The Medical Standard Book Co. Cloth, $6 net. 1914.

This well-known book of over a thousand pages of diagnostic methods is as complete as the most fastidious could demand. It is a model of its kind, the authors seemingly not having overlooked a single method of practical value used in the detection of diseases. By the additions and changes it is brought as nearly as possible for any textbook abreast of the times. Amongst the most important additions may be mentioned: Movements of the two halves of the chest, electro-cardiagrams, Rampell-Leed phenomena in scarlet fever, colloidal nitrogen of the urine, fatty emboli, the tick in trans-

mitting relapsing fever, succession sounds audible over the abdomen, cobra-venom reaction in syphilis, MacEwen's sign and Brudzendski's sign of epidemic meningitis, sweating and its significance, albuminous sputum, respiratory movements in hiccough, etc. As a diagnostic guide there certainly is no single volume book better.

Infant Feeding. By Clifford G. Grulee, A.M., M.D., Assistant Professor of Pediatrics at Rush Medical College (in affiliation with the University of Chicago); Chief of Pediatric Staff, Cook County Hospital; Attending Pediatrician to Cook County, Provident, and St. Bernard's Hospitals, and to the Home for Destitute Crippled Children, Chicago; Associate Pediatrician to the Presbyterian Hospital, Chicago. Illustrated. Second edition, thoroughly revised. Philadelphia and London: W. B. Saunders Company. Baltimore: The Medical Standard Book Co. 1914. Cloth, $3 net.

As a scientific exposition of infant feeding this book is thoroughly abreast of the times. It enters into the fundamental principles of infants' nutrition, special points in the anatomy of the gastro-intestinal tract of the infant, physiology of the gastro-intestinal tract in the infant, the physiology and pathology of absorption and metabolism, the bacteriology of the gastro-intestinal canal, the human breast and breast milk, nutritional disturbances in the breast-fed infant, foods used in artificial feeding, nutritional disturbances of the artificially-fed infant, as well as a rather detailed account of feeding in such conditions as the nervous infant, in rickets, infantile scurvy, eczema, etc. It was not until 1905, when a systemtatic effort was made by Czerny and Keller, that infant feeding was placed upon a rational basis. Since that time infant feeding has made great strides, until now it is a science in itself. When one stops to think that one-fourth of all deaths occur in the first year of life, and that of these about 60 per cent. are due to gastro-intestinal disturbances, one can only then realize that a proper understanding of infant feeding is a necessary part of the armamentarium of the general practitioner. It is the shoulders of the general practitioner which must bear the burden of starting the child out right, and if these individuals are not prepared to assume this obligation they are lacking in their equipment. Therefore, those who feel they are not properly prepared will find in this book a simple, but absolutely reliable, statement of the modern principles underlying infant feeding.

MARYLAND MEDICAL JOURNAL

NATHAN WINSLOW, M.D., *Editor.*

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BALTIMORE, DECEMBER, 1914

ABDOMINAL OPERATIONS.

INTRA-ABDOMINAL affections have so engrossed the attention of the profession of late and so much new light has been thrown upon this branch of medicine by such pioneers as the Mayos, Sir Arbuthnot Lane, Mayo Robson, Sir Berkeley Moynihan and others that our ideas concerning certain abdominal maladies have been completely changed. Like in all closed cavities until very recently our opinions as to what was going on had to be made from symptoms alone. It was indeed wonderful the diagnostic accuracy acquired by some under such conditions. Today the X-ray enables us to reach fairly accurate conclusions as to what is happening within the abdominal cavity. However, so far, the greatest progress in abdominal diagnostics was made through the exploratory incision of the pioneer surgeons mentioned above. They each and every one taught the lesson that chronic indigestion meant more than dyspepsia, that it meant disease of the gall-bladder, appendix, or other organ. We are therefore fortunate to have a book from the pen of one of these pioneers, one who had indeed done much to advance our knowledge of abdominal maladies, one who subscribes to his own opinions and observations, not others. Now for the third time Sir Berkeley Moynihan, M.S. (London), F.R.C.S., has rewritten and revised his book, "Abdominal Operations," and presented it to the profession in two volumes. As previously, the book is simply written and well illus-

trated. But best of all, after reading one is struck with the personality of the author permeating every page. Whether you are reading about symptoms, diagnosis or treatment, you are immediately impressed with the personal element entering into the make-up of the book. Rarely is it one's good fortune these days to procure a book expounding the opinions of the author alone, so that when one does come across such a book one is prone to give it more than the ordinary prominence. The latest surgery of the stomach, gall-bladder, biliary passages, large and small bowels and other intra-peritoneal organs is fully discussed by the author and amplified by magnificent illustrations.

We are in thorough accord with the author's statement: "The surgical treatment of cancer of the stomach still leaves much to be desired. The medical treatment is now, as it always has been, absolutely hopeless, and still involves a mortality of 100 per cent. The crying need in cases of carcinoma, not only of the stomach, but of all other parts of the alimentary canal, is for earlier diagnosis, and the chance of earlier surgical treatment. Amongst the notable achievements of surgery in recent years, chiefly as the result of the work in the Mayo clinic, is the proof that in a large proportion of cases the onset of cancer in the stomach is not a new and unaccountable thing, but is, on the contrary, a tardy development upon an earlier condition which for years has clamored for recognition."

He further states: "I am, of course, well aware that all cases of cancer of the stomach, unhappily, do not come to the surgeon. No one but the surgeon can do any good to a patient so afflicted. Yet there is a strange timidity of approach to the surgeon which is unaccountable, and far too often the favorable period in the history of the case is allowed to slip away before any recognition of real conditions is attempted." These few extracts admirably exemplify the character of the book. And, as here, throughout the author manifests a calm, judicial spirit in disposing of mooted questions.

Medical Items.

Dr. Herbert D. Taylor, who was graduated from Johns Hopkins Medical School in June, has been appointed professor of bacteriology and pathology, Wake Forest, North Carolina.

Dr. Taylor is a Baltimorean and a graduate of the class of 1910, St. John's College, Annapolis. For a time he was a member of the city staff of *The Sun*. Prior to going to Wake Forest he was engaged in dispensary work at Johns Hopkins Hospital.

At the meeting of the Baltimore City Medical Society, held at 1211 Cathedral street, Baltimore, Wednesday, October 21, 1914, interesting addresses were made by Drs. Hiram Woods, Lee Cohen, Alexander D. McConachie and H. O. Reik, all of Baltimore.

Dr. Eberle G. Welch and family, who have been spending some time at Atlantic City, where they were registered at the Chalfonte Hotel, have returned to their home.

A number of out-of-town physicians attended the sixth annual meeting of the American Association of Clinical Research, which was held in Baltimore, November 5, 6 and 7. Clinics were held at the Maryland General Hospital, the Biedler-Sellman Sanatorium (High Point), Dr. Howard A. Kelly's Sanatorium and the Hebrew Hospital. The sessions were held at Loyola College Hall. Mayor Preston welcomed the delegates to Baltimore at the first session, November 5.

Mrs. Ruth Briscoe has been appointed librarian of the medical department of the University of Maryland, Baltimore. The library contains more than 11,000 volumes.

At the twenty-fifth anniversary of the Johns Hopkins Medical School, tablets set in the walls of the hospital were dedicated. One of these tablets was in memory of the late Dr. John Hewes ton, who was assistant resident physician at the hospital from 1890 to 1894. Another in the lobby of the main hospital building was in memory of the late Dr. Daniel C. Gilman, first president of the university; another to Dr. James W. Lazear of yellow-fever fame, and still another to Dr. Rupert Norton, who died only recently while assistant superintendent of the institution.

At the annual meeting of the University of Maryland Medical Society, held in the hospital amphitheater on the evening of October 20, Dr. Albert H. Carroll was re-elected president and Dr. J. Howard Maldeis, secretary, for the ensuing year. Interesting addresses were made by Drs. Randolph Winslow and Frank Martin.

The semi-annual meeting of the Medico-Chirurgical Faculty of Maryland was held October 28 and 29 at Upper Marlboro, Prince George's county, Md. Addresses were made by Dr. Randolph Winslow, president of the faculty, and Dr. Henry B. McDonnell, president of the Prince George's County Medical Society. A tablet was erected to Dr. William Beans, one of the founders and organizers of the faculty, whose death occurred in 1828. Public meetings and a health exhibit were held under the auspices of the public instruction committee of the faculty during the meeting.

Dr. Howard A. Kelly of Baltimore visited Lexington, Ky., October 22, and delivered an address on "Social Hygiene."

Dr. George H. Whipple, a member of the faculty of the Johns Hopkins Medical School, has been appointed a director of the George Williams Hooper Memorial Foundation for Medical Research in the University of California.

Dr. John F. Spearman, formerly of Baltimore, is on duty with the German forces near Strasburg.

Dr. Veader N. Leonard of Baltimore, who left on the first Red Cross expedition, is on duty at a 300-bed war hospital at Paignton, New Devonshire.

Dr. Henry Key is reported to be seriously ill at the Hotel Altamont, Baltimore, with double pneumonia.

Dr. Eleanor B. Wolf, Baltimore, has sailed for India, where she will be a member of the medical staff of the Guntur Hospital.

Jere Lord, the four-year-old son of Dr. J. Williams Lord of 1011 North Charles street, was recently cut on the head when the automobile, driven by his father in which he was riding, struck a westbound car of the Harford Avenue line. The injury was dressed at the Johns Hopkins Hospital.

The Travel Study Club of American Physicians, which made a successful study tour of Europe last year, has completed the plans for its 1915 study tour to the A. M. A. meeting in San Francisco, Honolulu, Japan, the Philip-

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pines, China, with optional return via Siberia and Europe or via Canada. This being the first party of American physicians ever visiting the Far East and the new possessions of the United States, a most cordial welcome can be expected by authorities and members of the medical profession. The Travel Study Club would like to make its enterprise as representative as possible, and asks all those interested to communicate with the secretary, Dr. Richard Kovacs, 236 East 69th street, New York.

The engagement has been announced of Walter Clark Haupt, M.D., Johns Hopkins Medical School, 1914, of Roland Park, to Miss Mary Alden Morgan of Chicago, Ill. Dr. Haupt is a member of the staff of the Butler Hospital, Providence, R. I. The wedding will take place in the spring.

Dr. J. Charles Macgill of Catonsville, while driving in his automobile a short while ago, collided with a Preston Street car. He escaped injury, but the machine was badly damaged.

BIRTHS.

To Roger Brooke, Jr., Baltimore Medical College, class of 1900, Major, M. C., U. S. A., and Mrs. Brooke, October 18, 1914, a son—Roger Brooke, 3d. Major Brooke is stationed at the Presidio, San Francisco, Cal.

MARRIAGES.

Lawrason Brown, M.D., Johns Hopkins Medical School, class of 1900, of Saranac Lake, N. Y., to Miss Martha Lewis Harris of Baltimore, at Midland, Va., October 8, 1914.

Edward John Kempf, M.D., assistant physician, Johns Hopkins Hospital, of Baltimore, Md., to Helen Dorothy Clarke, M.D., of Longwood, Boston, at Longwood, September 28, 1914.

Roland B. Whitridge, M.D., of Baltimore, Md., to Mrs. Katharine Whiting Wallauer of Oxford House, Rye, New York, at Rye, November 18, 1914. After a Southern wedding journey Dr. Whitridge and his bride will occupy the residence 1208 St. Paul street. Dr. Whitridge is a son of the late Dr. Joshua B. Whitridge of Charleston, S. C.

W. Edward Gorman, M.D., Atlantic Medical College, Baltimore, class of 1909, of Springfield, Mass., to Miss Julia A. Whitmore of Wilmington, Del., at New York, October 24, 1914. Both Dr. and Mrs. Gorman are well known in Baltimore.

Ernest Howard Gaither, M.D., Baltimore Medical College, class of 1905, of the Latrobe Apartments, to Miss Elsie C. Langrall, both of Baltimore, Md., at Baltimore, November 4, 1914. Dr. Gaither is assistant to Dr. Thomas R. Brown at the Johns Hopkins Hospital.

Herbert C. Blake, M.D., Baltimore Medical College, class of 1905, of Baltimore, Md., to Miss Helen Niely of Catonsville, Md., at Catonsville, November 14, 1914. Dr. and Mrs. Blake will reside at 1014 West Lafayette avenue.

DEATHS.

S. Butler Grimes, M.D., University of Maryland Medical School, '97, of 101 Longwood road, Roland Park, Md., died suddenly at the home of his father in Baltimore, October 25, 1914, aged 39 years.

Ernest J. Waddey, M.D., University of Maryland Medical School, '91, of Waterloo, Iowa, a Fellow of the American Medical Association, died in St. Francis' Hospital, Waterloo, October 14, 1914, from organic nervous disease, aged 47 years.

John H. Grimes, M.D., University of Maryland Medical School, '68, of 2100 Maryland avenue, died of uraemic poisoning at the Enoch Pratt Hospital, November 7, 1914, aged 73 years. Dr. Grimes was stricken with paralysis three years ago and had been failing ever since.

William James Lumsden, M.D., University of Maryland Medical School, '69, a Fellow of the American Medical Association; for more than 40 years a practitioner of Elizabeth City, N. C.; one of the most beloved physicians of North Carolina, died at his home, October 14, 1914, from cerebral hemorrhage, aged 68 years.

Josiah T. Payne, M.D., University of Maryland Medical School, '68, a Confederate veteran and health officer of the Tenth District of Baltimore County, Md., died at his home in Sunny Brook, Md., October 2, 1914, from cerebral hemorrhage, aged 75 years.

Collier D. East, M.D., College of Physicians and Surgeons, '76, a member of the South Carolina Medical Association, of Goldville, S. C., died at the home of his sister in Clinton, S. C, September 20, 1914, from heart disease, aged 62 years.

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Medicine and Surgery

The Medical Journal Company

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IN REPLY TO INQUIRIES CONCERNING AMORPHOUS PHOSPHORUS.

Amorphous Phosphorus in Senile Arteriosclerosis.—The author has used the red amorphous phosphorus in senile arteriosclerosis for several years. Given originally as a substitute for ordinary phosphorus in senile debility, it was found that it was eliminated as amorphous phosphate of lime, and that the lime elimination was thereby increased. Weil's experiments showed that the lime elimination in arteriosclerosis was diminished. Phosphorus has the property of combining with lime and increasing the lime assimilation. In the small doses which can be given when the ordinary phosphorus is employed, the phosphorus will combine with the lime of the food and increase the amount of lime salts in the body. When given as amorphous phosphorus, the dose is two grains or more several times a day, and with a lime-free diet the lime required for the combination necessary to secure the elimination of the phosphorus excess is drawn from the abnormal lime deposits. This appears to be the rationale of the treatment and explains the good results obtained from its use. From *"Diseases of Old Age," by I. L. Nascher, M.D., to be published shortly by P. Blakiston's Son & Co., Philadelphia.*

Abstracts.

Dr. W. A. Puckner, director of the chemical laboratory of the American Medical Association, investigated a number of the products furnished by 20 different pharmaceutical manufacturers, and the degree of accuracy attained by each house was published in the *Journal of the American Medical Association,* September 13, 1913.

The results are given in detail and make it possible to summarize or classify them in various ways. For example, the average strength of all the preparations made by each house may be calculated. An objection to this method, however, lies in the fact that the preparations above strength, of any one house, might exactly counterbalance the ones under strength and the house receive thereby a perfect mark.

A more accurate method consists in calculating the average deflection from normal of the preparations of each house, and rank the houses in the contest in the order in which the average deflection is the least.

A third method would consist merely in stating the highest and lowest deviation from standard found in the products of each house.

By whatever method the results are summarized, The H. K. Mulford Company heads the list for accuracy of products.

The preparations examined, namely, hypodermic tablets morphine sulphate, tablets potassium idodine, solution of potassium arsenite, fluid extract of hydrastis and fluid extract of digitalis, should be divided in summarizing results into two classes. The first four mentioned are amenable to exact chemical assay, and it is possible, therefore, to determine within a fraction of 1 per cent. the exact deviation from standard, or conversely, approach to perfection of these preparations. Their standards are definitely fixed, either by the Pharmacopeia or by the manufacturer's claim

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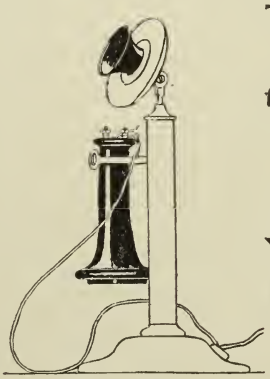

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—100 per cent. of the claimed strength being the target at which each manufacturer aims.

The other preparation, however, namely, fluid extract digitalis, is one for which no definite standard of strength has been fixed. The preparation is official, but no assay processes have been provided by the Pharmacopeia, so that a preparation made in strict accordance with the U. S. P. directions may vary enormously in activity. A limited number only of the houses chosen for this contest make any attempt to standardize digitalis preparations. A few, however, have adopted physiologic methods of assay in an attempt to put on the market preparations of uniform strength.

Even in the absence of a fixed and official standard of strength, it is obvious that a fluid extract of digitalis should have represented in each cubic centimeter one gram of a good quality of drug.

Dr. R. A. Hatcher of Cornell University Medical School, who examined the digitalis samples for Dr. Puckner, and made a special study of this drug for a number of years, is the inventor of the process by which these samples were examined, and is fully competent, therefore, to express an opinion as to whether a preparation does represent a digitalis drug of good quality.

Dr. Hatcher's results with the 19 fluid extracts examined in this contest forced him to the conclusion that the fluid extract of The H. K. Mulford Company fully represented a digitalis drug of good quality, and that the next in value only possessed 65.8 per cent. of the strength of the Mulford preparation.

The H. K. Mulford Company fluid extract digitalis was therefore taken as the standard, or 100 per cent. The other 18 preparations ranged from 65.8 per cent. down to a minimum of 29.25 per cent.

It cannot be claimed by those whose fluid extract digitalis was found to be weak in comparison with The H. K. Mulford Company sample that the latter is too strong, because Dr. Hatcher states that the Mulford preparation represents a good quality of drug.

To the credit of all the firms, Dr. Puckner states that there was found no evidence of willful sophistication or adulteration in any product examined. He believes that none of the houses deliberately adulterate or sophisticate their standard drugs, but that the products of many of them are made by those "who are less competent and less skilled" than the others. It is the more complimentary to The H. K. Mulford Company, therefore, that it should attain the first place with those who are doing their best to furnish standard articles. It is an emphatic endorsement of the competence and skill shown by The H. K. Mulford Company and products of their manufacture.

FROM PAPER READ BY A. N. DOERSCHUK, PRESIDENT, AT LAST MEETING, K. C. ASSOCIATION, RETAIL DRUGGISTS.

THREE PERNICIOUS DRUGS IN GENERAL USE OF COAL TAR ORIGIN.

Much discussion and comment was caused by the following extracts submitted by A. N. Doerschuk, President of the Association, on methylene blue and pyoctanin, much used internally in genito-urinary work, and on phenolphthalein, a popular ingredient in

CONSTIPATION in BOTTLE-FED INFANTS

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many laxative wafers and mixtures. These three drugs are distinctly of coal tar origin, and their physiological and toxic effects have been recently studied with much detail.

Methylene blue and pyoctanin, both forbidden as confectioner's coloring matter, are used internally in gonorrhea, malaria and rheumatism, and have found great popularity as component parts of many tablets and capsules advertised as effective and harmless in prolonged use for these ailments, in advised doses of from 6 to 24 grains daily. Galliard says: "Methylene blue in doses of one-sixth to one-third grain is capable of causing a feeling of general depression, nausea, certain feelings of pain and transitory albuminuria. In larger doses it causes in persons not accustomed thereto vomiting, diarrhea, increased micturition, and pronounced albuminuria." Cazeneuve says: "It produces gastric intestinal derangements which depend in part upon irritation of the intestinal tract, and partly upon irritation of the bladder, with increased micturition." Lewin says: "Methylene blue can produce, after prolonged administration, irritation and slowly healing ulceration of the bladder, blue coloration of the urine and saliva, diarrhea, headache, vertigo, delirium, loss of weight and twitching of the muscles, the latter symptom probably because the coloring matter is deposited in the brain." Santori found that Methylene blue given in nominal prolonged doses to dogs caused these same symptoms, with blood and pus contained in the urine, pronounced loss of appetite and weight, blue-colored skin and fat, brain turned blue on exposure to air, mucous membrane turned blue, heart sac, plura and kidneys colored blue throughout, and fatty degeneration of the liver.

Pyoctanin is found by several authorities to have almost identical results, and Santori found on autopsy of a dog that died after 14 days' dosing with this drug, the kidneys congested and containing accumulations of blood corpuscles, a blood-poor liver, and soft and swollen epithelia. This dog had lost weight rapidly, had shown a great dislike for food, and a great desire to sleep.

Phenolphthalein is classed by Lewin as strictly a coloring matter, as it becomes colored after ingestion and colors the system, and in its prolonged use causes many of the identical above-named symptoms and effects.

Indeed, these three drugs are typical of the action of coal tar groups upon the human economy which is not prepared to split those chemicals into component elements for absorption or elimination during the ordinary course of peristalsis.

Any substance that is absorbed by the tissues in its integral form and does not yield a true food value is of course dangerous.

LIABILITY OF DRUGGISTS.

A fine was recently assessed by the Government against the proprietors of a headache remedy labeled to be harmless and bearing the statement that it contained acetphenetidin. The Attorney-General is asking for a new ruling that requires derivatives as well as coal tar and narcotic drugs to be plainly named on the label. This shows the attitude of the authorities toward coal tar drugs, and the question arises should druggists not label drugs of this class as poisons, and should the pharmaceutical profession not consider it a duty to discourage the internal use of these chemicals wherever possible.

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eral materia medica in vogue a generation ago is much to be preferred to these still practically undetermined compounds that originated as "Medicines" in the by-products of German dyehouses, and which on merit would probably never have come into prominence. The present large consumption of these drugs is due to the known susceptibility of the American medical profession to propaganda work financed from abroad and made possible by the extremely low cost of producing these chemicals at the points of origin.

THE FUTURE OF INTERNAL MEDICINE.

"Surgery for everything is passing," says Dr. John B. Murphy, head of the Congress of Clinical Surgery. The future was never brighter than now for honest, legitimate internal medicine, with its wonderful advance and achievements in the last decade. The medical profession is turning from the fakes, nostrums and proprietories that carry a low cost of production and a high selling price, and which have not made good, and the educated apothecary is sure to benefit thereby if he keeps abreast of the times.

The public has observed that in too many instances the removal of the tonsils, for instance, marks only the beginning of throat trouble, and those who have submitted to the horrors of appendectomy too often wake up to find their bowel troubles have only just begun.

Intelligent co-operation with the medical practitioner will bring pharmacy to a brighter day than was ever before dreamed of for this profession.

Editorial Comment.

VOMITING IN CHILDREN.

The Medical Council.

THE infantile stomach is but partially developed structurally and functionally and emesis is readily induced. That overfeeding causes vomiting is well known; not so well known is the fact that underfeeding produces what Chemisse calls "inanition vomiting," which is often a serious affection marked by prolonged reversed peristalsis.

It is coming to be known that too great dilution of the infant's food is productive of a series of ills, inclusive of persistent vomiting. It really overtaxes the child's stomach to unduly dilute its food. Pale, wasted and restless babes may be noted among both the underfed and those having too great a bulk of food with little real nutritive value.

Vomiting from absolute intolerance for milk is very rare. Our city life, with its noise and hurry, is productive of nervous vomiting in children, and removal to the quiet country will often effect a cure of cases not thought to be nervous. Watch the babies for premonitary signs of this condition, such as rapid changing of color, hard abdominal muscles and spasmodic cough. Many of these coughs are thought to be pertussis, when, in fact, there is no such an element in the case.

The spasmophilic child, with tetany, rickets and perhaps scorbutus and diarrhea, is much given to vomiting. The fussy class of wealthy people who demand sterilization of everything for their

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1. SEROBACTERINS do not cause opsonic nor clinical negative phase. In the process of sensitization the bacteria are saturated with the specific antibodies, consequently they do not absorb antibodies from the patient, preventing unfavorable reactions or the so-called negative phase.

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This rapid action makes them invaluable in treatment and in preventive immunization. This is of great importance in controlling or preventing epidemics.

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(These reactions constituted the principal undesirable feature of the Bacterial Vaccines.)

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Typho-Serobacterin. (Sensitized Typhoid Vaccine.)

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Each syringe one dose.

For a complete review of the literature on Serobacterins, see Mulford Digest for December.

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children, induce rickets of a mild type or scurvy of masked character in their offspring. Look out for these cases.

Cyclical vomiting is common with neurotic girl babies and children with deranged livers. Vomiting of this character is too often attributed to intestinal obstruction or congenital stenosis of the pylorus, whereas the real cause may be hysteria or an organic trouble, such as fatty degeneration of the liver. Children are too often put under chloroform these days, and commonly for very slight reason or unnecessary treatment or operation—this ruins their nerves and digestive systems.

Rest of the stomach, mild laxatives, attention to underlying conditions, careful dieting and general care are more important in treatment than is medication. Sodium citrate helps many cases. In nervous vomiting chloretone is suggested. Alkalies are of value, in severe cases given intravenously. But in severe cases rest is of more importance than putting any stress upon the little patient, and certainly nothing at all should go into the stomach beyond a little ice, and, possibly, a trifle of cherry laurel water.

SANITARY BREAD.

The Pacific Pharmacist.

It is reasonable to suppose that a loaf of bread properly made, just as it leaves the hot oven, is absolutely sterile. This loaf should be kept sterile until it reaches the consumer. There should be a law compelling every baker to place every loaf into sterilized paper bags, and that without being touched by human hands. This is a practically possible procedure, and would entail but little additional trouble and expense to the baker. If the consumer could see what happens to the loaf of bread, or pie, or cake, or crackers before these articles reach him, the demand and consumption of the articles would diminish very much indeed. The loaves are handled by sweaty, dirty and, in some cases, diseased hands. We have seen a big mouthful of tobacco juice expectorated right into a box of crackers. We have seen a large basketful of unwrapped bread being dragged through a dirty alley to the back door of a most fashionable restaurant. We have seen dough workers with eruptive skin diseases kneading the dough. We have seen bakery drivers with unspeakably filthy clothing carrying armfuls of uncovered loaves. What excuse is there for sticking a label on the loaf of bread? The loaf is certainly filthy enough already without adding the saliva from the mouth.

Bread is designated the "staff of life," but it is not worthy of the name if it is not treated in a more sanitary manner. There should be a law compelling the sanitary handling of bread.

PLACENTAL MEMBRANES IN SKIN GRAFTING.

Ellingwood's Therapeutist.

Persistent effort has been made to find a substitute for the cuticle itself in skin grafting. A writer in the New York *Medical Record* claims that placental membranes can be used if properly selected and prepared. There is so much danger, however, of infection it seems as if an operator was taking unjustifiable chances.

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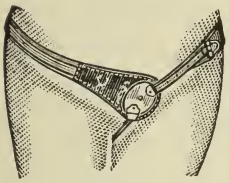

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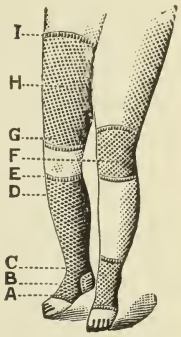

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name of Sander & Sons is illicitly appropriated, the make-up of their goods imitated, and finally the medical reports commenting on the merits of their excellent preparation are made use of to give the desired luster to the intended deceit.

This fraud, which was exposed at an action tried before the Supreme Court of Victoria at Melbourne, and others reported before in the medical literature, show that every physician should see that his patient gets exactly what he prescribed. No "just as good" allowed.

Throat Affections.

In all acute or chronic inflammations of the throat, pharyngitis, tonsilitis and laryngitis especially, Gray's Glycerine Tonic Comp. will be found of exceptional value. Used in appropriate dosage it allays congestion of the mucous membrane and underlying tissues, thus relieving pain and soreness, and by imparting tone to the local structures helps to restore normal conditions. "Gray's," moreover, is particularly useful as a prophylactic measure in those patients who are peculiarly subject to frequent colds. In such cases its use from time to time tends to increase the resistance of the local mucous membrane and enable it to successfully combat germ attack. Public speakers and singers are also greatly benefited by "Gray's," and if administered for several days before putting the throat or voice to unusual strain, it can be relied upon to increase the strength and vitality of the local structures.

Pil Cascara Comp: Robins.

These pills are just so much different from the average Cascara pill that their reputation for therapeutic action has been its chief source of commendation for the past 20 years.

In the first place, it contains no Belladonna to dry the secretions nor Strychnine to poison. Robins Cascara Pil Comp is composed of the following ingredients: Cascara, ½ gr.; Podophyllin, 1-16 gr.; Colocynth, ¼ gr.; Hyoscyamus, 1-12 gr. These pills are also compounded in a stronger form, containing four times the strength of the above formula. These evacuants encourage and stimulate flow of the secretions and, unlike many laxatives of cathartics, they do not leave the alimentary track in a condition of atomy after their use.

A trial of these pills is a most satisfactory method of determining their value and the most convincing argument as to their therapeutic efficiency.

A. H. Robins Company, Richmond, Va., will be glad to send you samples on request. Write them.

A Tale of Taka-Diastase.

To multiply by two the medicinal efficacy of a powerful diastasic ferment is a notable accomplishment. And that is what scientific investigation has done for Taka-Diastase. The result, as may be presumed, was not achieved at a single fortunate stroke. It was the culmination of years of study and experimentation. The story is briefly told on another page of this issue of the Maryland Medical Journal, over the signature of Parke, Davis & Co. It bears this caption: "We Have Doubled the Strength of Taka-Diastase." The reader is advised to turn to this announcement, which should prove of interest and value to every practitioner who faces the problem of amylaceous dyspepsia.

A word here with reference to the therapeutic application of Taka-Diastase may not be amiss. The product may be prescribed with advantage in the treatment of any pathological condition in which the salivary digestion is inhibited or impaired—in any case of gastric or intestinal disorder in which the starches are digested with apparent difficulty. It is employed with good results in the dietetic treatment of subacute and chronic gastritis; in infantile diarrhea, especially in cases in which the diarrhea alternates with constipation; in malnutrition or inanition; in the vomiting of

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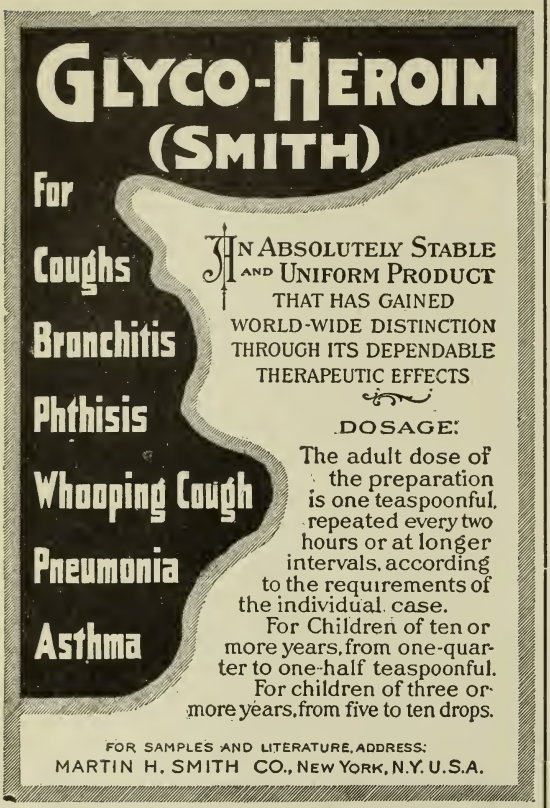
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pregnancy; in diabetes due to pancreatic disease.

Scientific Contributions to the Literature of Atophan by American Investigators—The "Greater" Field of Atophan.

THE striking and therapeutically so valuable selective action of Atophan and its tasteless derivative Novatophan upon the uric acid output of the organism and the regulation of the purin metabolism has been the subject of an already very long list of publications, chiefly from the pen of European clinicians and pharmacologists of note.

More recently, however, American scientific investigators, too, have been attracted to the study of these most interesting substances, and have in every way confirmed the earlier findings.

Prof. Otto Folin and Dr. Henry Lyman of the Biochemical Laboratory of Harvard Medical School, Boston, have contributed an article "On the Influence of Phenylquinolin Carbonic Acid (Atophan) on the Uric Acid Elimination" to the *Journal of Pharmacology and Experimental Therapeutics*, July, 1913, in which, for the firt time, the effect of Atophan medication upon the uric acid of the blood is made the subject of thorough investigation. This has been made possible only by the introduction of the new and very exact colorimetric uric acid test of Folin and Denis. In every one of the six cases of gout in which Atophan was given under purin-free diet, the medication led to a pronounced increase in the uric acid elimination and a corresponding reduction of the uric acid content of the blood.

Prof. Howard D. Haskins of the Physiologic and Biochemical Laboratory, Western Reserve Medical College, Cleveland, reports in the September issue of the same publication, under the title of "The Effect of Atophan and Novatophan on the Endogenous Uric Acid Excretion of Normal Men," the results of his experiments with 21 medical students who were apparently in good health and who had been kept on a purin-free diet for at least one week before Atophan or Novatophan were administered. Sixteen of these showed an increase of urinary uric acid excretion of over 200 milligrams, four a noticeable but lesser figure, and one no increase at all. The author concludes that the action of Atophan does not merely consist in stimulating the kidneys to abstract from the blood a greater quantity of uric acid than they otherwise would, but that the main effect of the drug is to drain uric acid out of the blood, leaving the uric acid content of the latter subnormal.

While both these investigations add still further scientific evidence to the superior qualifications of Atophan and its derivative as therapeutic agents in gout and other manifestations of the uric acid diathesis, it should not be forgotten that entirely independent of their uric acid "mobilizing" action, these substances possess marked analgesic, antipyretic as well as powerful antiphilogistic effect. This has been very conclusively demonstrated clinically by Professor Klemperer of Berlin, who disposes of an experience covering the use of approximately 20,000 15-grain doses in nearly 300 cases of acute polyarthritis treated at the Municipal Hospital, Moabit, during the past two years (*Therapie der Gegenwart*, June, 1913).

A most convincing demonstration of the powerful antiphlogistic effect of Atophan and its derivative has been furnished by Professors E. Starkenstein and W. Wiechowski of the University of Prague in the entire suppression, in guinea pigs treated with Atophan, of the violent chemosis following ocular instillations of

essential oil of mustard (*Prager Medizinische Wochenschrift,* January 16, 1913).

Atophan and Novatophan will therefore also be found of the greatest value in lumbago, muscular rheumatism, neuritis, sciatica, hemicrania, migraine, non-specific iritis, episcleritis, otosclerosis, and generally in all painful inflammatory conditions, whether uratic or non-uratic in character.

THE modern conception of ptosis no longer regards it as involving any individual organ of the abdomen as a primary pathologic process, but that gastroptosis, enteroptosis, nephroptosis, and the like, are but end-results of a ptosis habit, having its root in the constitutional defects of the patient. Any device, therefore, which aims to prevent this conditon must adapt itself to this broader conception of its character and modus operandi. It is because it has taken cognizance of these things and brought itself into alignment with them, that the Storm Binder has established for itself a unique and enviable reputation among abdominal binders. It conforms, in the most scientific way, to all that is most reliable and intelligent in our knowledge of the anatomy and physiology of ptosis; and while bringing the abdominal viscera into proper position, it does not interfere with the functional activity of either the viscera or the muscles, which is so essential to a natural recuperation of their normal power.

CLINICAL MEDICINE, Aug., 1913.

A Sedative of Distinctive Value.

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THE wide popularity of Papine (Battle) has logically followed as a consequence of its value as a prompt anodyne and one that is free from most of the evil features attaching to morphine. When opiates become clearly necessary for the relief of pain in nervous women or in children, physicians will find Papine (Battle) to be as effective as opium, and with the distinct advantage of being free from most of opium's disagreeable effects.

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References

DR. WM. OSLER, Oxford, Eng. DR. JULIUS FRIEDENWALD, Baltimore. DR. WM. S. THAYER, Baltimore.
DR. HENRY M. HURD, Baltimore. DR. NATHAN R. GORTER, Baltimore. DR. J. ALLISON HODGES, Richmond, Va.
DR. THOS. A. ASHBY, Baltimore. DR. SAMUEL C. CHEW, Baltimore. DR. WM. F. DREWRY, Petersburg, Va.
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Medical Items.

Dr. Herbert Harlan, President of the Maryland Board of Medical Examiners and a member of the Executive Committee of the Federation of State Medical Boards of the United States, desires to call particular attention to the coming meetings in Chicago, Ill., February 23-25, 1914, both dates inclusive, at the Congress Hotel, of the Conferences of the Council on Medical Education and the Council on Health and Public Instruction, and of the annual meeting of the Association of American Medical Colleges and of the Federation of State Medical Boards of the United States. It is important that as many representatives as possible from all the medical colleges in the State, as well as from the Board of Medical Examiners, be present.

BIRTHS.

To Walter C. Gordon, M.D., University of Maryland Medical School, '07, and Mrs. Gordon, of 610 Cranston street, Providence, R. I., November 9, 1913, a son—Walter Colwell Gordon, Jr.

Recently to E. L. Whitney, M.D., associate professor of physiological chemistry, pharmacology and clinical pathology, Maryland University, and Mrs. Whitney, of 1520 Linden avenue, a daughter.

Recently to Dr. Clement A. Penrose, Johns Hopkins Medical School, '97, and Mrs. Penrose, of 21 West Mt. Royal avenue, a daughter—Valeria Biddle Penrose.

MARRIAGES.

George B. Lawson, M.D., Johns Hopkins Medical School, '05, of Roanoke, Va., to Miss Julia Kern, daughter of Senator and Mrs. John W. Kern of Indiana, at Hollins, December 25, 1913. After an extended southern tour, Dr. and Mrs. Lawson will make their home in Roanoke, where the groom is practicing his profession.

James Homer Wilson, M.D., Johns Hopkins Medical School, '08, of Cumberland, Md., to Miss Emelie Elizabeth Steffey, of Washington, D. C., at Washington, January 7, 1914. They will reside in Cumberland.

Charles B. Henkle, M.D., University of Maryland Medical School, '89, former alderman of Annapolis, to Mrs. Margaret M. B. Hall, both of Annapolis, Md., at Annapolis, December 9, 1913.

Charles L. Schmidt, M.D., University of Maryland Medical School, '11, formerly of 2211 Eutaw Place, now of Union Bridge, to Miss Jane I. Purdum of Reisterstown, Md., at Baltimore, December 17, 1913.

DEATHS.

S. E. Young, M.D., Baltimore Medical College, '93, of Baywood, Va., died January 9, 1914, aged 53 years. Dr. Young was the physician for the General Chemical Company, at the Gossan mines in Carroll County, for a number of years.

F. L. Woolfolk, M.D., Washington University, Baltimore, '77, of Louisa, Va., died at his home January 10, 1914, aged 59 years. He was president of the Farmers and Merchants Bank of Louisa.

Henry Stier Pole, M.D., Washington University, Baltimore, '80, of Hot Springs, Va., died at Lewisburg, W. Va., December 28, 1913, from heart disease, aged 66 years. Dr. Pole was a Fellow of the American Medical Association, and president of the Bath County, Va., National Bank.

Silas Weir Mitchell, M.D., Jefferson Medical College, '50, of Philadelphia, Pa., died at his home in Philadelphia, January 4, 1914, from influenza, aged 85 years. Dr. Mitchell was eminent as a neurologist and universally known as a writer of historical novels, dealing mostly with the times of the Revolutionary and Civil Wars; a medical power in Philadelphia, and honored for his attainments the world over.

Charles Sumner Little, M.D., Johns Hopkins Medical School, '99, of Petersburg, Ind., died at his home, December 13, 1913, from heart disease, aged 40 years.

William Samuel Jennings, M.D., College of Physicians and Surgeons, '85, of Orangeburg County, S. C., died at the home of his brother in Orangeburg, December 7, 1913, from disease of the kidney, aged 55 years.

Tertia Claire Wilton Little, M.D., Women's Medical College of Baltimore, '93, of Letchworth Village, Thiells, N. Y., formerly assistant physician to the New England Women's Hospital, Boston, and the Massachusetts State Hospital, Taunton, died in the Women's Hospital in the State of New York, New York City, October 25, 1913, after a surgical operation.

Fellows_Syrupus Hypophosphitum

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Abstracts.

THE RELATIVE VALUE OF TURTLE TUBERCULIN IN THE TREATMENT OF TUBERCULOSIS.

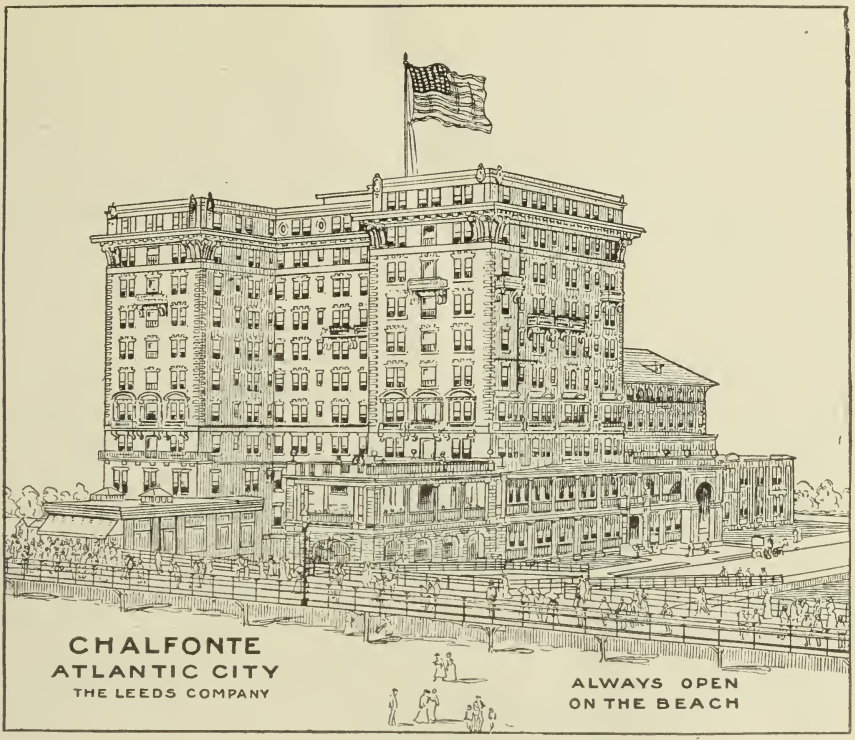
"The treatment of individual diseases with medicines or by methods of having a selective curative action has until recent years been limited. With the establishment of the germ theory and vaccine therapy of certain diseases and the development of information concerning immunity, new methods of specific treatment have been made possible and are now practiced under the terms of serum and vaccine therapy." This is part of an introductory paragraph of a valuable contribution on the above subject appearing in the New York Medical Journal for September 13, 1913, by Drs. J. W. Beattie, of New Hampshire, and E. E. Meyers, of 418 Central Park West, New York City.

Th authors mention the fact that to Robert Koch belongs the honor of giving to the world 23 years ago tuberculin, which was the first great advance in the diagnosis of tuberculosis. Prior to this, the disease was generally recognized as a fatal malady; it was not diagnosed until the disease was advanced and the symptoms marked, and then death was required to substantiate the diagnosis. His discovery of the difference in the action of the remedy on the healthy and the tuberculous has proved to be one of the most important discoveries in the modern study of tuberculosis. This discovery gave the profession the tuberculin test, which has not only made possible an early diagnosis of the presence of tuberculosis, but has also given us a more thorough understanding of the nature of the disease and the essentials of its prevention, as well as led to its specific treatment.

Drs. Beattie and Meyers quote Von Ruck's reference to the claims of Friedman for the superior value of a living tubercle bacilli in the treatment of tuberculosis, and deprecates the Berlin doctor's spectacular advertising propaganda in the daily press. Von Ruck said: "Inasmuch as living tubercle bacilli of the human type have been found in vaccinated cattle both in their flesh and in their milk, as long as three years after their intravenous injection, the objection to use of the living tubercle bacilli as an antigen, or vaccine for prophylactic purposes in the human subject is well founded. A more formidable objection is, however, the danger of virulence."

They aver Professor Piorkowsi, working along the lines of Prof. Koch's discovery, isolated a living antigen in the form of Tubercle bacilli recovered from a turtle, as far back as 1903 without in any manner questioning its non virulence. Since that time he has continued his research along this line and has at last succeeded in perfecting a tuberculin produced from the tubercle bacilli of a deep-sea turtle, which is non-virulent and with which he has successfully experimented with thousands of cases during the past few years at his laboratory in Berlin.

Further quoting Piorkowski, the authors refer to his lecture delivered at the Royal Hospital for the Disease of the Chest, London, Eng., on April 1st, 1913 (1 British Journal of Tuberculin, July issue, 1913). On discussing his Turtle Tuberculin, Piorkowski said: "We must differentiate between mammals which produce



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their offspring alive and the class to which human beings and oxen belong; and birds *i. e.*, that is, animals which lay eggs; thirdly, reptiles, which possess horny or long integument and also lay eggs. Lizards, crocodiles and turtles belong to that last class. Finally, we have to think of fishes which breathe as long as they are young through gills or by their lungs, and also lay eggs. We thus see very clearly that resemblances are to be found only among lung-breathing animals, and it is for this reason, probably, that the results described are obtained on the injection of tubercle bacilli of similar kind. It became very evident that turtles were especially adapted for our purpose."

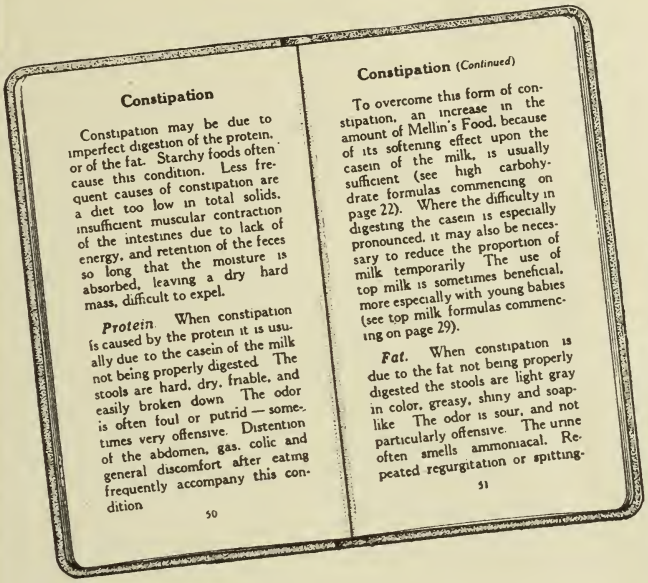
In further describing his work along this line Piorkowski says: "It is very noteworthy that the turtle tubercle bacillus in its further behavior, both culturally and morphologically, displayed an extraordinary resemblance to the human tubercle bacillus. Its growth at 37 degrees F. is remarkably characteristic. The main point about this strain is that it can be used without risk of any manifestations—a circumstance which may be ascribed to the fact that for the last ten years it has been reinoculated afresh daily, and thus has acquired generally an extraordinary innocuousness, becoming both avirulent and atoxic."

The authors in explaining the biological action of Piorkowski's Turtle Tuberculin quote the latter as follows: "Let us, for example, consider atoxic action a little more closely. When a poison enters the body—*e. g.*, tubercle toxin—the first point concerns the existence of receptors which can take up the tubercular poison. If these do not exist, no infection by tubercle bacilli can occur, for the organism possesses congenital immunity towards the action of these bacilli.

The harmless turtle tuberculous toxin combines with the receptors, and the combination is thrown off into the blood as antitoxin. New receptors are formed in large quantity, but they are capable of seizing not only the turtle tubercle bacilli, with which they have been hitherto dealing, but also human bacilli, and thus render them harmless. If there is a profuse formation of new receptors, and if the human tubercle bacilli have increased unduly, complete recovery may be effected. The rationale of the cure is along these lines. There is also the additional advantage that turtle tubercle bacilli are innocuous and harmless, and therefore this method is especially well adapted for protecting inoculation.

Recent investigations with turtle tuberclin, in Prof. Piorkowski's laboratories, made by the authors, show that tubercle bacilli, when grown in the blood serum of (cold-blooded animals), turtles change quite distinctively its bacteriological characteristics, particularly in lessening its virulence and at the same time increasing its power to form antibodies in the blood of the tuberculous patients. This turtle tuberculin acts as a direct stimulant to the antibodies of tuberculosis, exerting far greater beneficial effects than human tuberculin, even when the latter is given in the most carefully graded and guarded doses. Furthermore, turtle tuberculin produces only a very slight reaction, besides it possesses far greater immunizing properties than does human tuberculin with none of the latter's untoward effects.

According to the author's experience, the smallest immunizing dose was one minim of turtle tuberculin administered in 16 minims of normal salt solution. The internal between doses depends


Constipation
Constipation may be due to imperfect digestion of the protein, or of the fat. Starchy foods often cause this condition. Less frequent causes of constipation are a diet too low in total solids, insufficient muscular contraction of the intestines due to lack of energy, and retention of the feces so long that the moisture is absorbed, leaving a dry hard mass, difficult to expel.
Protein. When constipation is caused by the protein it is usually due to the casein of the milk not being properly digested. The stools are hard, dry, friable, and easily broken down. The odor is often foul or putrid — sometimes very offensive. Distention of the abdomen, gas, colic and general discomfort after eating frequently accompany this condition.
50
Constipation (Continued)
To overcome this form of constipation, an increase in the amount of Mellin's Food, because of its softening effect upon the casein of the milk, is usually sufficient (see high carbohydrate formulas commencing on page 22). Where the difficulty in digesting the casein is especially pronounced, it may also be necessary to reduce the proportion of milk temporarily. The use of top milk is sometimes beneficial, more especially with young babies (see top milk formulas commencing on page 29).
Fat. When constipation is due to the fat not being properly digested the stools are light gray in color, greasy, shiny and soap-like. The odor is sour, and not particularly offensive. The urine often smells ammoniacal. Repeated regurgitation or spitting.
51

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upon the recurrence of exacerbation of original symptoms, which is usually about seven days. Very slight reactions, such as a rise of temperature to 100 F., and more or less languor for about 24 hours following the injection are the only reactions which occur even with a maximum dose.

The best site for injection of turtle tuberculin is in the fold of the gluteal region between the Glutens Maximus and Minimus muscles, which location facilitates absorption.

In closing the authors make the following comparisons:

LOCAL REACTION.

Human Tuberculin	*Turtle Tuberculin*
Redness and infiltration begin in area of injection in from four to eight hours.	Redness and infiltration begin in area of an injection in twelve hours.
No thickening of the skin.	Slight elevation and thickening of skin.
Area of infiltration usually very tender.	Area of infiltration is not tender.
Abscess sometimes follows injection.	No abscess follows at point where needle pierces skin.
Adjacent lymph glands swollen.	Lymph glands not swollen.

Human Tuberculin	*Turtle Tuberculin*
Doses smaller.	Doses greater.
Effect slower.	Effect more rapid.
Reaction marked.	Reaction slight.
Length of treatment prolonged.	Length of treatment short.

Hygienic Treatment	*Turtle Tuberculin Treatment*
Not always feasible.	Always feasible.
Treatment prolonged.	Treatment shortened.
Necessitating interference with daily avocation.	Does not interfere with daily avocation.
Results not always satisfactory.	Results very encouraging.
Recurrence frequent.	Recurrence improbable.

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BACTERIN or vaccine therapy, carried out by the use of killed bacteria, has now been successfully applied to the prevention and treatment of many infectious diseases. Clinical experience has proven beyond question that these products produce a degree of immunity which enables the person treated to resist infection and which is of great value therapeutically. The length of time required before the immune condition is present and the local and general reactions which sometimes follow the first and occasionally subsequent doses are, however, factors calling for improvement.

To remedy the first of these defects, experiments were made with mixtures of serum and killed bacteria, with the idea that by this means immediate passive immunity could be had, as well as a more permanent active immunity, but this procedure resulted in failure, as only a slight degree of passive immunity was secured and no active immunity whatever. Besredka attributed this failure

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to the excess of serum present in such mixtures, and for the preparation of his "sensitized vaccine" took advantage of the discovery of Ehrlich and Morgenroth that bacteria mixed with a serum containing specific antibodies unite permanently wth such antibodies. After maceration in the immune serum for a sufficient time the sensitized bacteria are recovered by centrifugalization. The bacteria, with their antibodies attached, are then washed in the centrifuge with physiological saline solution until all traces of serum are removed. Careful complement fixation and animal tests are employed to make sure that proper sensitization has taken place, and finally the bacteria are made up into standardized suspensions for administration. Since the value of serobacterins depends on thorough sensitization, and the complement fixation test proves the extent to which this has taken place, this test constitutes a vital part of the technic.

Besredka claims that sensitized bacterial vaccines or "serobacterins" possess a great advantage over the bacterial vaccines now in common use, in that their action is far more rapid, and they produce no clinical or opsonic negative phase, and no local or general reactions. His reasearches have been confirmed by such prominent investigators as Marie, Remlinger, Dopter, Theobald Smith, Metchnikoff, Gordon and others, all of whom found that sensitization of bacteria confers upon them new properties which render them highly effective as vaccines, free from the defects of the ordinary bacterial vaccine and "possessing an action which is *certain, inoffensive, rapid and lasting.*"

A large number of favorable reports have appeared on the value of serobacterins in the preventive and curative treatment of such diseases as cholera, plague, typhoid fever, dysentery, streptococcic and pneumococcic infections, gonorrhoea and even tuberculosis and rabies. Sensitized plague vaccine is now official in the French Pharmacopœia, sensitized tuberculin is coming into very general use in Germany and other European countries, and sensitized rabies vaccine, on account of the rapidity and greater certainty of its action, has been adopted as the official Pasteur treatment.

The underlying principle explaining the action of serobacterins, according to Besredka, is that the bacteria prepared by sensitization are rapidly devoured by the phagocytes, and this is the cause of the absence of unfavorable reactions following their use. The combining of antibodies and bacteria outside the body disposes of a long-drawn-out preliminary process which, with the bacterial vaccines, must be done by the patient's body cells. In serobacterins, this combination of antibodies with the bacteria being already performed, their action is immediate and free from local and general reactions.

The action of serobacterins may be characterized as follows:

1. *Certain*—because the bacteria are already prepared for phagocytosis and intra-cellular digestion.
2. *Rapid*—an effective immunifying response follows the first injection in from 24 to 48 hours.
3. *Harmless*—Being saturated with antibodies, the serobacterins do not absorb any of those present in the blood of the patient, and consequently cause no opsonic or clinical negative phase. They are free from toxic action.

Improved Bacterial Therapy

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Serobacterins are suspensions of bacteria "sensitized" by treatment with specific immune serum.

The advantages of **Serobacterins** may be briefly summarized as follows:

1. SEROBACTERINS do not cause opsonic nor clinical negative phase. In the process of sensitization the bacteria are saturated with the specific antibodies, consequently they do not absorb antibodies from the patient, preventing unfavorable reactions or the so-called negative phase.

2. SEROBACTERINS produce immediate active immunity.

(24 hours after the first injection an effective immunity is present and marked improvement is usually noted in the condition of the patient.)

This rapid action makes them invaluable in treatment and in preventive immunization. This is of great importance in controlling or preventing epidemics.

3. SEROBACTERINS cause no local or general reaction.

(These reactions constituted the principal undesirable feature of the Bacterial Vaccines.)

4. SEROBACTERINS produce a highly efficient and durable immunity.

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Each syringe one dose.

For a complete review of the literature on Serobacterins, see Mulford Digest for December.

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4. *Permanent*—Animal experiments prove that the immunity secured from the use of serobacterins or sensitized bacterial vaccines is more permanent than that following the use of bacterial vaccines.

The rapid production of active immunity marking the action of serobacterins is invaluable in both the treatment of disease and preventive immunization. In treatment of a patient infected with rapidly multiplying pathogenic bacteria, the prompt immunizing response should overcome the infection before it causes serious damage. In preventive immunization, especially in epidemics, the advantage of securing immediate immunity should make the use of serobacterins almost obligatory.

Sensitization is a delicate and complicated procedure which can be successfully carried out only in especially equipped laboratories by experts of the highest type. The difficulties surrounding the preparation of sensitized vaccines have up to the present time prohibited their general use, and the production of this superior vaccine on a scale that will make its use possible in every-day practice marks an important step in bacterial therapy.

A very complete review of this most interesting subject appears in The Mulford Digest for December, and we suggest that any physician who has not received a copy of the December Digest containing this review should secure one.

REPUTABLE MANUFACTURING PHARMACISTS DO NOT FURNISH EMMENAGOGUES FOR IMMORAL PURPOSES.

Recently one of the leading manufacturing pharmaceutical houses received a letter upon the letterhead of a retail druggist, but signed by another name followed by the word "druggist." The person signing the letter may have been a clerk or successor of the druggist. The letter was as follows:

There is practically no sale for your Emmenagogue Improved Pills, as few ladies know anything about them, and we can give no advice, as we know nothng about them ourselves as to dose, etc. Please let us know by return mail and tell us how to use, dose, etc.

Reply was made to the pharmacist, whose name was on the letterhead, and was as follows:

We have our doubts about Mr. ——— being a druggist, for we cannot imagine any druggist not knowing that it is not only immoral, but criminal, to sell an emmenagogue except upon a physician's prescription. We believe that every druggist who sells an emmenagogue direct to the consumer is put upon his notice that it will be used for an immoral and criminal purpose. Emmenagogues on our list are intended exclusively for the prescription trade and we never knowingly sell them for popular use or to be recommended and resold as remedies for female complaints, etc.

EVERY PROSTITUTE A VENEREAL.

Ellingwood's Therapeutist.

The medical authorities in Paris claim that every prostitute has syphilis, and none escape gonorrhea longer than a few weeks. Consequently this entire class of individuals can be counted as always affected with venereal disease. This fact is probably no less true in this country than it is in France.

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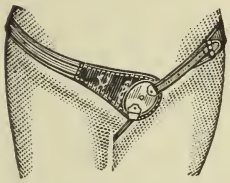

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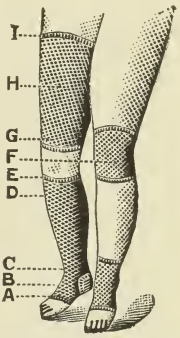

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Danger Due to Substitution.

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The most recent fraud practiced in regard to this product is an attempt to profit by the renown of the firm of Sander & Sons. In order to foist upon the unwary a crude oil, that had proved injurious upon application, the firm name of Sander & Sons is illicitly appropriated, the make-up of their goods imitated, and finally the medical reports commenting on the merits of their excellent preparation are made use of to give the desired luster to the intended deceit.

This fraud, which was exposed at an action tried before the Supreme Court of Victoria at Melbourne, and others reported before in the medical literature, show that every physician should see that his patient gets exactly what he prescribed. No "just as good" allowed.

Iodine as the Sole Dressing for Operation Wounds.

THE following excerpts are taken from The British Medical Journal and are a part of an address delivered by Reginald Alcock, M.B. F.R.C.S. Edin. Dr. Alcock's acquaintance with the use of iodine as the sole dressing for operation wounds dates back over a period of thirty years when he first saw it used in the practice of medicine by his father, who was a hospital surgeon.

In opening his address he said, "Medical opinion concerning the utility of iodine as an agent in the production of asepsis has oscillated between contemptuous neglect and unqualified praise. At the present time its virtues are recognized on every hand, and its exceptional usefulness as a skin sterilizant needs no further emphasis, but reliance on its extended efficacy as the sole dressing to be applied to the operation wound from the date of the operation to the discharge of the case, is, I venture to think, a new departure."

Further on in his paper Dr. Alcock says, "looking through the literature relating to the sterilization of the skin, I have been struck with the fact that special stress is laid upon the difficulty experienced in rendering the deeper layers of the skin sterile, and especially with the fact that any moisture of the skin

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means the detection of bacteria, where previously they were absent, if attempts had previously been made to discover them on a dry skin."

In view of Dr. Alcock's valuable studies on iodine referred to above, it is interesting to know that there is a new chemical compound of iodine on the market especially adapted to surgical requirements, namely, Iogen, Lilly. This chemical is produced by the action of iodine on the anhydride of phthalic acid. The peculiar property of this chemical compound which renders it so valuable in medical and surgical work, is that it liberates iodine only in the presence of moisture, a fact that is peculiarly significant in view of Dr. Alcock's theory that the bacteria usually come from the moisture and secretions of the skin itself rather than from without.

Iogen is prepared for surgical work by diluting it with a suitable vehicle so that it will liberate but a small percentage of pure iodine and that very gradually.

Iogen is offered in three forms by Eli Lilly & Company; as surgical powder, as oil and as an ointment. These preparations are claimed to be superior to the ordinary tincture of iodine in several respects, they are easier of application, furnish nascent iodine, act over a long period and have a wider range of usefulness. Certainly such preparations as the Iogen group, Lilly, should prove a welcome addition to the physicians' armamentarium.

Lilly's Iogen preparations are supplied through the drug trade and physicians interested can secure further information and samples by addressing the Eli Lilly & Company, Indianapolis.

Sixty Centuries of Kidney Disturbances.

THE Babylonians in 4000 B. C. made as careful an examination of the urine as was in those days possible; even the earliest records known of Hindu medicine show that they also examined the urine, this examination being regarded as of great importance as an indicator of disease. Hippocrates tapped the abdomen and gave diuretics in the form of broom straws. Celsus laid special stress on diet, regular habits, advised baths and sweating and increased the number of diuretics. Erasistratus, grandson of Aristotle, in the fourth century before Christ, advanced the medical view of disease and invented the catheter. Ammonius about this time invented an instrument for crushing stones in the bladder. (In use today).

William Solisto about the beginning of the fifteenth century described a disease which he called "hardness of the kidney," and gave as symptoms heaviness and decrease in the amount of urine, pain in back and dropsy.

Four centuries then passed before the next step, when Richard Bright described more fully the disease that bears his name.

Then another century of therapeutic inactivity in the treatment of diseases of the kidney followed, with, of course, the exception of surgical methods, until Renault corroborated forcibly all that had been proven regarding the internal secretions by giving the macerations of the young pig's kidney in cases of nephritis, with marvelous success. It naturally, at times, proved impossible to obtain, and often disagreeable to take, this soupy concoction of raw kidney, and for this reason the method had its drawbacks. But in 1906, Nephritin, a product embodying all the advantages of the above method of treatment, with none of its disadvantages, was given to the medical profession, and the first new and real therapeutic agent for Bright's and other forms of nephritis was completed.—*When Did It Happen? Published by Reed & Carnrick.*

The Phylacogen Treatment of Infections.

AN interesting experience with Phylacogens has been narrated by Dr. E. H. Troy, of Oklahoma. It appeared in a recent number of the International Journal of Surgery.

"I have treated twenty-four cases of rheumatism," writes Dr. Troy. "Their recoveries were as rapid as remarkable. One man of thirty-two had had rheumatism for three years; he was confined to bed for three months, and eight months elapsed before he was able to work. He was brought to the hospital on a bed and had to be lifted on a sheet. I gave him one dose of Phylacogen daily, and in six days he walked to the station, carrying his suit-case. Another patient, a man twenty-four years old, had inflammatory rheumatism

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when ten years of age. He was confined to bed for six months. He has suffered all his life, and had visited the various watering-places in America, receiving very little benefit. The last four years he had been almost incapacitated. I gave him ten doses of Phylacogen, and his recovery was rapid."

Dr. Troy refers to a number of other cases of infection, including chronic otitis media, sycosis, acne, carbuncle and erysipelas, in the treatment of which he has been singularly successful, and adds:

"The administration of Phylacogen is peculiarly adapted for the treatment of infectious diseases. * * * The only requirement is to make a diagnosis. If you are treating infectious diseases without making a diagnosis, however, do not be disappointed if you do not get results with the Phylacogens."

"Just Plain Nervousness."

Toward the relief of that condition which may be aptly characterized as "just plain nervousness," PASADYNE (Daniel) will be found of distinct value. PASADYNE, of course, is merely a high grade Concentrated Tincture of Passiflora Incarnata, and possesses a definite calming influence. It is in nervous states marked by sleeplessness that PASADYNE (Daniel) in moderate dosage, shows its marked usefulness. A sample bottle (without cost) may be had by addressing the laboratory of John B. Daniel, Atlanta, Georgia.

The Bladder Ills of the Aged.

Certain bothersome bladder troubles of elderly people are often due quite as much to systemic debility as to local weakness. Lack of space prevents any extensive consideration of the subject, but if the whole body is debilitated the metabolism is sure to be deranged, the bowels become sluggish and an increased amount of abnormal or waste products find their way into the urine. These are more or less irritating and account not infrequently for the low grade form of cystitis that accompanies the "run-down" state of the aged. In such cases tonic medication is urgently indicated and the well known capacity of Gray's Glycerine Tonic Comp. for promoting functional activity and increasing bodily elimination gives it a special utility in the management of any bladder trouble in which metabolic depression or derangement is a factor.

Under its influence the functional activity of the whole organism is promptly increased with the result that physiologic processes throughout the whole body are stimulated, the metabolism is regulated and elimination increased.

The benefits from "Gray's," therefore, are both prompt and pronounced, and through its use many cases of chronic cystitis that are due to or aggravated by general debility or malnutrition are cleared up in short order.

In this connection it is no exaggeration to state, moreover, that few remedies are more serviceable in all conditions calling for tonic or upbuilding measures than Gray's Glycerine Tonic Comp.

Chronic Glandular Enlargement.

For many years Iodia (Battle) has been a favorite agent in chronic glandular enlargement, owing to the distinct alterative influence it is capable of exerting. In such conditions there is a clear indication for iodine, and this is furnished the tissues through the administration of Iodia (Battle). The therapeutic value of this drug is augmented by the active principles of such well known vegetable alteratives as stillingia, helonias, saxifraga, and menisperum.

The Tuberculous Invalid.

THE pricking of the Friedmann bubble but served to still further confirm and accentuate the vital importance of the well-defined methods of treatment for tuberculosis that have given such encouraging results, *i. e.,* fresh air, sunshine, rest, nutritive reinforcement and judicious medication. A proper combination of these four remedial factors is practically certain to place the incipient tuberculous invalid upon the road to recovery if the patient is intelligently handled and the treatment persisted in. While it is, of course, acknowledged that the first three non-medical agents referred to constitute the vital elements of the upbuilding regime, considerable aid is afforded by judicious medication. Hematinic reinforcement should certainly not be neglected, in view of the secondary anemia which is almost always apparent. Among the agents which have produced the best results in the revitalization of the blood, Pepto-Mangan (Gude) is the most generally eligible and acceptable. As it is thoroughly palatable, neutral in reaction, free from irritant properties and devoid of constipating effect, the digestion of the patient is not disturbed, while the appetite and general vital tone improve more rapidly and satisfactorily than when hygienic and nutritive measures are depended upon exclusively.

Hay Fever: "Disease of Mystery."

DR. S. FULLER HOGSETT of Pittsburgh, in his excellent paper "An Experimental Therapy in Hay Fever," read at a meeting of the Uniservity of Pittsburgh Medical Society, and published in the April (1913) issue of *American Medicine*, New York, points to some interesting facts respecting this "disease of mystery," as he not inaptly refers to it. "As far back as the year 1565," says the doctor, "Botallus reported a case. Again, in 1673, Von Halmont, and in 1698 Floyer, of London, called attention to this condition. In Good's 'Study of Medicine' there is reference to a case related by Timaeus in 1667 of an attack of asthmatic nature caused by the odor of roses and ipecac."

Thus it will be seen that hay fever, instead of being a disease of modern origin, as many may have presumed is in reality centuries old.

Discussing the problems of etiology and treatment, Dr. Hogsett continues: "Many theories have been elaborated, and many forms of treatment have been called to the attention of the medical profession. A strain of pessimism regarding the possibility of a cure in this condition appears in the writings of many authors. No one theory accounts for all features of the affection and the many etiological factors."

In 1912 Dr. Hogsett treated a number of cases successfully with Mixed Infection Phylacogen. His observations as to methods and results are of interest and value. "In carrying out the Phylacogen treatment," he says, "I have found that the initial dose should be small when given either subcutaneously or intravenously. It has been my procedure to begin with a 2 c. c. dose subcutaneously or one-half c. c. intravenously. In giving the subcutaneous injection I usually select the insertion of the deltoid or the area just below the scapulæ. The latter seems to be the ideal spot, as absorption takes place very readily and the complaints from the local reaction are much less. I repeat my injection either daily or on alternate days, the interval to be determined by the clinical condition of the patient. It is seldom necessary to give more than four to six injections, the symptoms often disappearing after the second or third injection. Almost immediate relief is noted by the patient. The irritating discharges from the eyes and nose are diminshed in amount, the sneezing is lessened, the dyspnea is relieved, and the patient usually sleeps comfortably. All cases that I have treated successfully have remained well through the season. I have yet to record only one failure, but I have not had a sufficient number of this class of cases as yet to warrant a positive claim that this remedy will act in all forms of the disease."

Clinical experience with Mixed Infection Phylacogen in the treatment of hay fever is inconsiderable as yet. The product had its inception in 1912, when the season was well advanced, and the opportunities for its employment were necessarily limited. The next two months will undoubtedly tell the story of its applicability to this hitherto intractable disease, and the results of a more extended trial will be watched with a deal of interest.

THE physician of today follows out a law of Celsus, who in 100 A. D. said, "Never take the pulse of a patient immediately on coming into the room, but wait until the momentary excitement subsides."—*When Did It Happen? Published by Reed & Carnrick.*

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BATTLE CREEK, MICH., January ——.

FOUR hundred men and women of prominence, comprising the first representative group of scientific experts ever gathered in America for that purpose, met in Battle Creek January 8-12 to assemble evidence of race deterioration and to consider methods of checking the downward trend of mankind. The meeting was known as the First National Conference on Race Betterment. Through the co-operation of the press, the objects and aims of the conference have been very widely disseminated, and a resultant influence for better race ideals is anticipated.

Already the effect of the conference is apparent in Battle Creek, where popular interest in mental and physical efficiency was awakened by a series of public school tests, which showed an alarming percentage of defective children in all grades.

The conference had its inception in the efforts of four men particularly interested in race betterment—Rev. Newell Dwight Hillis, pastor of Plymouth Church, Brooklyn, N. Y.; Dr. J. H. Kellogg of the Battle Creek Sanitarium; Sir Horace Plunkett, former minister of agriculture for Ireland, and Prof. Irving Fisher of Yale University. At the invitation of a central committee chosen largely by these men, fifty men and women of national prominence in the fields of science and education consented to share in the program. Their addresses, together with open discussion of many of the points considered, constituted a very widespread study of all phases of evident race degeneracy and the advocacy of many ideas of reform. Some of the suggested methods of improvement are frequent medical examination of the well, outdoor life, temperance in diet, biologic habits of living, open-air schools and playgrounds, the encouragement of rural life, the segregation or sterilization of defectives, the encouragement of eugenic marriages by requiring medical certificates before granting license, and the establishment of a eugenics registry for the development of a race of human thoroughbreds.

Among those having a share in the program were Rev. Newell Dwight Hillis, Jacob Riis, Judge Ben B. Lindsey, Booker T. Washington, Dr. Victor C. Vaughan, Dr. S. Adolphus Knopf, Dr. C. B. Davenport, Dr. J. N. Hurty, the Very Rev. (Dean) Walter Taylor Sumner, and many others of equal prominence.

Some of the interesting statements of the conference are summarized as follows:

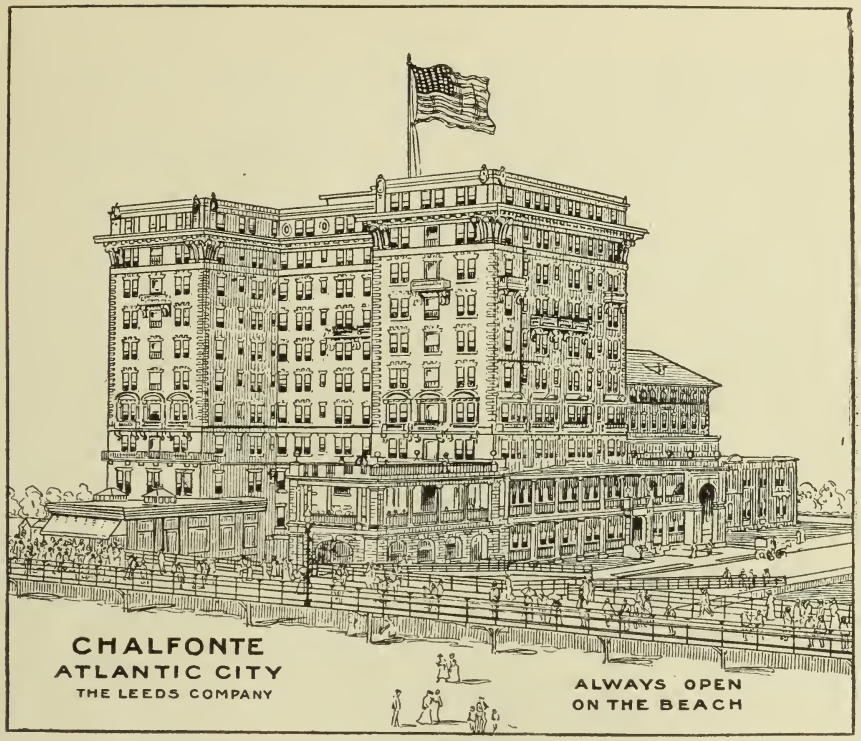
It will be no easy task to improve the race to the point where there will be no dependent children, but the elimination of the dependent child will be one of the best indices of the superiority of our national stock.—*Dr. Gertrude E. Hall, New York State Board of Charities.*

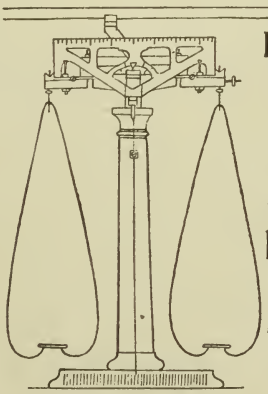
I believe that a great deal can be done by publication of facts as to the physiological effects of alcohol, in the way of inducing educated and intelligent people to conserve their health by limiting the use of alcohol or giving it up altogether.—*Henry Smith Williams, Author.*

Eugenics does not eliminate romance. We eugenists believe romance should be retained. Through the past it has proved a good thing.—*Prof. Roswell H. Johnson, University of Pittsburgh.*

In order that the race may survive it will apparently be necessary to make a eugenic selection of healthy mothers and to provide that the cost of bearing and rearing children shall be equally shared by all.—*Prof. J. McKeen Cattell, Editor Popular Science Monthly.*

The boys are learning that they have a calling just as sacred as the call





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to motherhood, and that is the call to fatherhood."—*The Very Reverend (Dean) Walter Taylor Sumner of Chicago.*

The negro in the South, with all his weaknesses and handicaps, is not yet in any large measure in the ditch.—*Booker T. Washington, Principal of Tuskogee Institute.*

We must cultivate pure blood instead of blue blood if we would develop a race of human thoroughbreds.—*Dr. J. H. Kellogg, Superintendent Battle Creek Sanitarium.*

Abstracts.

PRESIDENT'S ADDRESS—PROCTOLOGY AND PROCTO-ENTEROLOGY.

By Louis J. Hirschman, M.D., Detroit, Mich.

Read before American Practologic Society, June 16-17, 1913.

He stated that, "Proctology come into its own," is in reality the study of the entire intestinal tract, its diseases and their remedies. A proctologist becomes skilled to a high degree in the medical and surgical treatment of the diseases of the lower bowel. A medical practitioner sufficiently skilled and competent to treat diseases affecting any portion of the intestinal tract should be competent to treat all portions. The modern proctologist, therefore, must be an intestinal surgeon. He must have knowledge of modern views and discoveries bearing on the digestive tract, as they have a direct bearing on intestinal function and pathology. He should no more limit his activities to the rectum and sigmoid alone than does the laryngologist to the larynx, or the urologist to the urethra.

An arbitrary line of division which limits a specialist's activities to the lower six or eight inches of the colon is absurd. The proctologist has no moral right to withhold his special skill in intestinal surgery from the patient who suffers from diseases of the small intestine or upper colon. The larger problems of intestinal stasis, chronic inflammatory conditions, and malignant diseases of the small and large intestines, demand the best that is in every fellow of our organization. He should ever study and fathom out the problems of etiology, pathology and proper therapy.

The establishment of a section on gastro-enterology and proctology in the American Medical Association would greatly increase the value of that organization to every one of its members who comes in contact with diseases of the alimentary tract.

It is the American Medical Association which should foster all that is new and valuable in medicine. It is the greatest medical educational institution in our country; and the fellows of the American Proctologic Society should be the most enthusiastic supporters of such a section, if established.

REPORT OF A CASE OF FECAL TUMOR ASSOCIATED WITH HIRSCHSPRUNG'S DISEASE.

By Alois B. Graham, A.M., M.D., Indianapolis, Ind.

Read before American Practologic Society, June 16-17, 1913.

Dr. Graham reported a case of fecal tumor associated with Hirschsprung's disease, a clinical history of which is unique and exceedingly interesting. The patient, a young French woman,

Over-feeding of fat is often responsible for constipation in bottle-fed infants

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aged 27, stated that she had undergone three abdominal operations for Hirschsprung's disease, or megacolon.

Present illness dates from birth. Not unusual to go a week or 10 days without a stool, and then evacuation was produced only by means of enemata.

At the age of 12 her condition was diagnosed as one of pregnancy on account of the vomiting and the appearance of the abdomen.

At the age of 19 she suffered an attack of complete intestinal obstruction, due evidently to fecal tumor. She was operated, and a large fecal tumor was removed from the sigmoid. Six months later she was operated for post-operative adhesions. No resection of the bowel or short-circuiting operation was performed.

At the age of 25 she suffered an attack of complete intestinal obstruction. She was operated, and a large fecal tumor was removed. Patient stated that the bowel was plicated in closing. Wound healed promptly, but she remained in the hospital for three months purely for clinical purposes.

August, 1912, she, for the third time, presented symptoms of complete intestinal obstruction. She had been absolutely constipated for seven days. Abdomen enlarged and everywhere tympanitic, except in the lower right quadrant, where there was a dull area corresponding to a large tumor which could be readily palpated. Tumor, a fecal mass, was exceedingly hard, and did not pit on pressure. It could be easily moved in every direction throughout the abdomen. Attacks of violent, colicky pains were frequent. Vomiting was persistent, pulse 120, temperature 101 F. Hydrogen peroxide, introduced into the rectum, had no effect on the tumor, but produced excruciating pains over the entire abdomen. Patient consented to operation, with the promise exacted that nothing radical be attempted. She requested that the fecal tumor be removed, but refused to give her consent to any short-circuiting or resection of the bowel.

Median incision. No adhesions. Fecal tumor in sigmoid. Tumor of "stony" hardness. Its greatest circumference was 19¾ inches, its weight was 64 ounces. The dilatation which was confined to the sigmoid was very marked, the greatest circumference being 20 inches.

Patient made an uneventful operative recovery, and was discharged from the hospital on the tenth day. She gained in weight, and appeared to be in the best of health. She experienced no difficulty in procuring daily evacuations with the aid of small doses of cascara.

December 15, 1912, was the date of her last visit to the writer's office. At this time she was doing nicely. Inquiries as to her whereabouts were made, and the reports were to the effect that she has returned to France. Information was received the latter part of April that patient had gone to Chicago from Indianapolis. She evidently suffered another attack of intestinal obstruction. She was operated there April 19, 1913, and died three days later.

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A METHOD OF OPERATING ON FISTULA WITHOUT CUTTING MUSCULAR TISSUE.

By Rollin H. Barnes, M.D., St. Louis, Mo.

Read before American Practologic Society, June 16-17, 1913.

This method is used in those cases of fistulæ which involve the sphincter muscles. An incision is made external to the sphincter, similar to that made when incising an ischio-rectal abscess. Through this opening the scar tissue is dissected out up to the internal opening. An incision is then made at the skin margin, so that the middle of this incision passes through an imaginary longitudinal line drawn from the internal opening. A submucous dissection is then channeled out up to the internal opening. Gauze drainage is kept in this until the external wound is healed sufficiently. Then the submucous tract, which remains, is incised under local anesthesia. No muscular tissue having been cut, the function of the sphincters is preserved intact.

Z-PLASTIC OPERATION FOR ANAL STRICTURE.

By William M. Beach, M.D., Pittsburgh, Pa.

Read before American Practologic Society, June 16-17, 1913.

The writer states that extensive cicatrices, resulting from trauma, and involving the partial or entire anal circumference, not infrequently resist the usual methods employed to restore the physiologic function of the anus.

He, therefore, employed what he terms a Z-plastic method when operating on an anal stricture. The principle underlying the procedure is the transposition of dermic tissue in such manner as to obliterate the crest of the fibrous band.

The first incision is made along the crest of such a band; then incisions are made at right angles from both ends, but running in opposite directions, thus approximating the letter Z. The flaps thus outlined are dissected up, transposed and sutured. Various modifications are permissible, according to the extent of the stricture.

SPHINCTERIC ATROPHY—CAUSES, CONSEQUENCES AND TREATMENT.

By Ralph W. Jackson, M.D., Fall River, Mass.

Read before American Practologic Society, June 16-17, 1913.

Muscular atrophy about the anus produces more serious consequences than hypertrophy.

The physiology of defecation is studied, and the action of the internal sphincter and of the external sphincter and levators sharply contrasted with their different innervation. This is preparatory to consideration and classification of the causes of sphincteric disuse and consequent degeneration.

Congenital causes are found in imperforate anus and congenital ano-vaginal cloaca. Coincidental with general weakness cases occur in infants, the aged and the extremely ill. Traumatic causes are faults of proctologic operations and after-care, or obstetric lacerations, or due to prolonged divulsion by protruding

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piles or procidentia. Nerve causes are primarily sympathetic as in rectal stenosis, or central as in spinal cord lesions.

Degeneration or absence of one sphincter without impairment of the other is considered.

The unhappy consequences of sphincteric inadequacy are presented.

Treatment is preventive or restorative. Neither avails much when due to nerve causes, except possibly in luetic cases. Of first importance is the minimizing of trauma, both obstetric and proctologic (especially sphincteric incision). Repair of trauma should be immediate and accurate. Later attempts are much more difficult and uncertain on account of atrophic muscular changes, and often results must depend on cicatrical contraction and adaptation of other muscles, especially the levators, to sphincteric duty. Restoration of long-overstretched muscles is largely dependent on general treatment.

Sphincteric deficiency is a troublesome problem to every practitioner, and the prognosis is uncertain.

C. W. POST.

(The same being a few lines dedicated to a pal.)

Some envy you your millions, some envy you your fame,
Some envy you the buildings great on which is carved your name;
Some envy you your luxuries and some your great success,
And some the force for doing things which you today possess.
But I—I saw a young man gaze at you as you passed by
And O, I envy you the look that lit that youthful eye.

I do not envy you your chance to give in large amounts;
When all is said and done it's not the size of gifts that counts;
I do not envy you because you own this building fine,
I might not be a better man today if this were mine.
But did a young man look at me in such a grateful way
As I have seen one look at you, I'd happier be today.

I do not envy you your wealth, I might gain that and more
And still not have one single friend come smiling to my door;
A man might climb the topmost heights of fame and stand apart
The cleverest one of all the age—and be a cad at heart.
I envy no man's skill, but Oh, I'll say to you tonight
I envy you the grateful look that made that boy's eyes light.

I envy you his smiling face, his kindly thoughts of you,
I envy you the splendid deeds that some day he will do;
For in his eyes, I read of you, not sordid gifts of gold
For which, so oft, the taker finds his manhood he has sold
But kindness in a larger sense, above all place and pelf,
I envy you the chance you gave that youth to help himself.

I have no wish to leave behind great monuments of stone,
I'd rather leave my finger prints on living flesh and bone.
I'd rather leave but one behind, who, when I've gone, shall say:
"He helped me up to better things, he smoothed my troubled way."
If only one speak thus of me, I shall not fear to die,
And so tonight I envy you that look as you passed by.

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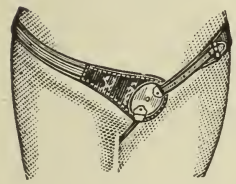

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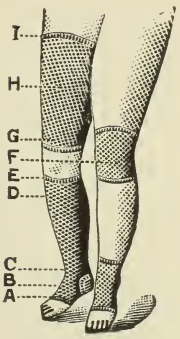

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This fraud, which was exposed at an action tried before the Supreme Court of Victoria at Melbourne, and others reported before in the medical literature, show that every physician should see that his patient gets exactly what he prescribed. No "just as good" allowed.

The Great Practical Advance in Serotherapy and Immunization by Means of Serobacterins.

SEROBACTERINS are sensitized bacterial vaccines or suspensions of killed sensitized bacteria. In the language of the laboratory, they are produced by saturating bacteria with the specific antibodies found in the serum of an immunized animal, removing the excess of serum by centrifuging and suspending the bacteria in a saline solution. According to the trustworthy reports of bacteriologists and clinicians, they are destined in great measure to supplant other means of immunizing against and treatment of many infectious diseases.

The method of sensitizing is, in brief, the treatment of killed bacteria with specific immune serum whereby the bacteria unite with the immune bodies present in the serum, so that upon injection the combination is ready for immediate attack by the "complement" in the patient's blood.

There is thus secured a great gain of time over the older methods of bacterial therapy, and whether in prevention or treatment, this immediacy is of the utmost value. In a few days, for instance, by typho-serobacterin, the practitioner may now secure for his patient im-

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munity against typhoid as formerly in nearly a month with the old typhoid vaccine.

Other advantages are that there is no local irritation at site of injection and little or no lassitude or sickness. More important, still, is the fact that there is no negative phase. The size of the doses may also be greatly increased, even quadrupled, thus assuring rapidity of production and strength of immunity.

Of interest in this connection are the laboratory results of Theobald Smith and the work of Von Behring in combining diphtheria toxin and antitoxin for immunization against diphtheria. By making mixtures containing varying amounts of toxin and antitoxin they were able to secure any degree of immunity—from a short passive immunity due to the serum, to an active immunity of long duration, resulting from the action of the toxin.

To the foregoing advantages of the uses of serobacterins it may be added that in very late stages of the disease, when the bacterial vaccines and even serum treatment is ineffective, successful results are sometimes obtained and life is saved.

Besredka, of the Pasteur Institute, authoritatively summarizes the matter by saying:

"Whatever the nature of the virus, whether the microbe of plague, dysentery, cholera or typhoid fever, or whether the virus of rabies or the toxin of diphtheria, whether the microbes are killed or living, sensitization confers upon them properties which convert them into vaccines of the first order, possessing an action which is sure, rapid, inoffensive and durable."

The results of the clinical use of serobacterins in actual practice give, of course, the final and convincing test. Of such reports one notices that of Gordon, on the successful use of strepto-serobacterin (sentitized streptococcus vaccine) in erysipelas, emphasizing the fact that when the treatment did no good it did not do the slightest harm; that prophylactically in the face of epidemics it should have a great future; that in hospitals the resistance of the patients may be raised to bacillus coli, streptococcus pyogenes, or the pneumococcus before operations on the alimentary tract or other infected area; for preventing secondary infections and possibly in cases of difficult labor. He says that in cases already infected, the evidence shows that in a proportion of instances it is possible by this method to promote materially the patient's recovery. "By administering a sensitized vaccine to these patients we appear to bring into action available reserves in that complex and still incompletely defined entity, the patient's specific resistance."

As to the dosage, Gordon, in erysipelas, gave as the first dose 500 million; 24 hours later the second dose was 1000 million; the third, in 24 hours, was 2000 million.

Broughton-Alcock found that in acute and chronic gonorrheal urethritis the injections were of little value, but that good results were almost invariable in gonorrheal orchitis, epididymitis, arthritis and periarthritis, tenosynovitis, acne, furunculosis, impetigo, seborrheic eczema.

Boinet found that the good results in typhoid fever were in accordance with its use nearer the beginning of the infection, diminishing the gravity and shortening the duration of the disease.

In gonorrhea Cruveilhier found that in all cases the duration of the disease was sensibly modified; in acute gonorrheal rheumatism he reports a number of cures. In cronic gonorrheal rheumatism and metritis favorable results are reported.

Speaking generally, serobacterins give active immunity within 24 hours after the first injection, with marked improvement in the patient's condition. They produce no opsonic or clinical negative phase—and, therefore, will do away with this cause of solicitude on the part of physicians using the ordinary bacterial vaccines in the past.

To insure that the serobacterin is properly sensitized careful complement fixation tests are carried out to ascertain the extent of antibody absorption by the bacteria. As a further safeguard guinea pigs are injected and the action of the serobacterin is followed by means

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of a series of tests made with the blood serum of the treated animal.

Great care is advisable in the selection of a sensitized vaccine, or serobacterin—the product only of that manufacturer should be chosen of the highest professional character.

A complete review of the Literature on Serobacterins appears in the *Mulford Digest* for December, and we suggest that those who have not received a copy of this issue request one, to be read and kept on file for future reference.

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The Therapy of Chronic Coughs.

THE logical therapy of chronic coughs does not lie in the use of soothing expectorants, whose main purpose is the blunting of the mucosa's sensibility and which do not really help the bronchial tree free itself of the cough's cause. Such treatment is palliative.

The logical treatment of chronic coughs embraces the continued use of a tissue food which will enable the system to throw off a cough—Cord. Ext. Ol. Morrhuae Comp. (Hagee), for instance. Cod-liver oil in the form of this cordial quickly demonstrates its marked value in this condition.

Gold Medal to Armour.

The Seventeenth International Congress of Medicine, London, August, 1913, awarded to Armour a gold medal, the highest award in the class, for Digestive Ferments (Pepsin and Pancreatin). We present photographs of the two sides herewith.

The medal is a handsome one; it represents the acknowledgment of the jury selected by this great scientific body of men that Armour's Pepsin and Pancreatin were of such quality as to entitle them to the highest award, a verdict that bears out the statement made by headquarters that Armour's Pepsin is the best product of the sort.

New Catalogue.

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A NEW departure in the medical field has recently been established by Gilbert T. Smith, M.D., who won his spurs not only in this country, but in the Alaska-Canada Survey. Dr. Smith has been connected with several institutions in New York and Connecticut that pay special attention to patients suffering from the drug habit and nervousness. He has recently established a bureau, giving special attention to patients who desire to travel, and is forming a chain of sanatoriums acting as a sort of clearing-house, so that when called in consultation he can select an institution that has facilities for taking care of special patients. Dr. Smith arranges tours to all parts of the world, taking entire charge of the routing of patients, attendants, tickets, etc. This new departure will be welcomed by the medical profession of the country, as the average practitioner, while well informed as to the care of the sick, many times is not informed as to the facilities of many of the large hospitals and sanatoriums for taking care of patients.

Dr. Smith can be reached at Stamford, Conn.

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Antiquity of Milk as a Food.

FROM time immemorial milk has been used as a food. It was necessary for the nomad tribes of Southern and Eastern Russia and Central Asia to have a milk preparation that could be carried and used in their wanderings. This they prepared from mare's milk and was called kumiz. Herodotus gives an account of it as used by the Scythians and Virgil sings of a tribe who drank of it.—*When Did It Happen? Published by Reed & Carnrick.*

Pioneer.

As a result of the newspaper notoriety given bichloride of mercury poisoning cases, there is a country-wide agitation regarding the sale of tablets containing this substance. It is a dangerous poison and one that should be surrounded with every safeguard to prevent accidental misuse and error. That evidently was the idea in mind when Diamond Antiseptics were placed on the market nine years ago. These tablets were pioneer safeguards then, and have continued to minimize the dangers to

users of bichloride ever since. Diamond Antiseptics render legal enactments unnecessary. The talk of legislation and restrictions has also led other manufacturers to offer bichloride of mercury tablets of special design supplied in special containers, so that if legislation of any kind is needed all that should be done, it would seem, is to prohibit the sale of bichloride of mercury in tablet form in the shape of the ordinary round or cylindrical medicinal tablet. The original pioneer safeguards, however, were and are Diamond Antiseptics, Lilly.

The Unrest of Acute Infection.

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Number Four

APRIL, 1914

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Upon their return to this country they will occupy their cottage at Newport, returning to Baltimore in the fall.

Dr. Thomas W. Koon, Physicians and Surgeons, '93, of Cumberland, Md., has been elected Mayor of Cumberland.

Dr. Thomas R. Brown, Johns Hopkins Medical School, '97, and Mrs. Brown, who have been occupying during the winter months their town residence, 19 W. Biddle street, will reopen their cottage at Ruxton, Md., in April.

Dr. Gordon Wilson, 1318 N. Charles street, had his automobile stolen recently. The theft occurred while Dr. Wilson was eating his dinner. It was later recovered.

At a recent meeting of former patients of Mercy Hospital, an organization was formed to be known as the Ex-Patients' Association of Mercy Hospital. Temporary officers were elected as follows: Dr. E. P. Smith of Mercy Hospital, president; Mr. Frank E. Schraeder, 309 Guilford avenue, vice-president, and Mrs. Robert Ellis, 1718 N. Calvert street, secretary.

The honor system was recently instituted at the Johns Hopkins University. It resembles in many respects the systems in practice at Princeton, Washington and Lee and other colleges, the only difference being that it is not compulsory.

BIRTHS.

To William T. Chipman, M.D., University of Maryland Medical School, '12, and Mrs. Chipman of Felton, Del., February 24, 1914, a son—Harrison Berlin Chipman.

To Judson E. Hair, M.D., University of Maryland Medical School, '12, and Mrs. Hair of Greenville, S. C., February 18, 1914, a daughter—Martha Ivy Hair.

To Dr. Jacob Wheeler Bird, University of Maryland Medical School, '07, and Mrs. Bird of Sandy Spring, Md., March 9, 1914, a son—Jacob Wheeler Bird, Jr.

DEATHS.

Charles S. Rannells, M.D., Washington University, Baltimore, '76, a member of the Kansas Medical Society, and for thirty-six years a practitioner of Allen county, died at his home in Savonburg, February 26, 1914.

Charles Irwin Hill, M.D., Baltimore Medical College, '99, of Baltimore, Md., died at his home in Baltimore, February 24, 1914, aged 35 years. Dr. Hill was for several years a member of his Alma Mater; from 1900 to 1904 assistant surgeon, National Guard of Maryland, with the rank of captain, assigned to the Fourth Infantry, and formerly assistant physician and pathologist at the Springfield State Hospital and Mount Hope Retreat.

Matthew James McKinnon, M.D., University of Maryland, '53, of York, Pa., died at his home in York, February 23, 1914, aged 82 years. During the Civil War Dr. McKinnon was a surgeon in the Forty-third Pennsylvania Volunteer Infantry.

Anselm Dimmic Hatch, M.D., College of Physicians and Surgeons, '82, died at his home in Plymouth, Ill., February 5, 1914, aged 50 years.

Whitefield Otis Dunham, M.D., University of Maryland, '91, founder and surgeon of the Dunham Hospital, Sioux Falls, S. D., died at his home in that city, February 18, 1914, from typhoid fever, aged 53 years.

John Allston Dent, M.D., Maryland Medical College, '04, of Baltimore, Md., died in the Maryland General Hospital in that city, February 1, 1914, aged 52 years.

Dennis Lawrence Glynn, M.D., Baltimore Medical College, '02, of Portland, Conn., a fellow of the American Medical Association, died at St. Francis' Hospital, Hartford, Conn., January 30, 1914, about six weeks after an operation for appendicitis, aged 38 years.

John Roth, M.D., Baltimore University, '94, for twenty-three years a member of the police force of Baltimore, died at his home in Baltimore, January 30, 1914, aged 62 years.

Henry Tucker Harrison, M.D., University of Maryland, '74, of Club Hill, Harford road, Maryland, died at his home March 4, 1914, aged 70 years.

J. Lowrie Ingle, M.D., New York Medical College, '71, of 1007 W. Lanvale street, Baltimore, died at his home March 20, 1914, from angina pectoris, aged 67 years. Dr. Ingle was formerly in charge of Sydenham Hospital.

John W. Getzendanner, M.D., University of Maryland Medical School, '70, of Myersville, Md., died at the home of his daughter, near Middletown, March 11, 1914.

James B. Merritt, M.D., of Easton, Md., died at the Church Home and Infirmary from cancer of the stomach March 8, 1914, aged 55 years.

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COLLEGE OF SURGEONS.

An American College of Surgeons was organized at a meeting in Washington on Monday evening, May 5, 1913. Four hundred and fifty prominent surgeons of the continent of North America came together at the invitation of an Organization Committee, which was appointed by the Clinical Congress of Surgeons of North America at its meeting in November, 1912. This committee consisted of Edward Martin, of Philadelphia; Emmet Rixford, of San Francisco; John B. Murphy, of Chicago; Rudolph Matas, of New Orleans; Albert J. Ochsner, of Chicago; Charles H. Mayo, of Rochester, Minn.; Frederic J. Cotton, of Boston; George Emerson Brewer, of New York City; J. M. T. Finney, of Baltimore; W. W. Chipman, of Montreal; George W. Crile, of Cleveland, and Franklin H. Martin, of Chicago.

The invitations, which resulted in this large gathering of surgeons in Washington, were extended by the Organization Committee after a carefully prepared campaign in which each large university city on the continent was visited by a member of the committee, who met, in person, a group of selected men brought together by a committee of three in each locality, which committee had been authorized by the Organization Committee to extend an invitation to the surgeons in their locality to meet the representative of the Organization Committee. These five hundren men who were invited to the meeting in Washington, four hundred and fifty of whom responded, represented all branches of surgery and surgical specialties. The surgeons responding to the invitation were designated the Founders of the College.

FOUNDERS' MEETING.

At this meeting in Washington, called for the purpose of effecting an organization, the Committee on Organization presented a definite tentative plan, which plan included a call of the meeting, the presentation of by-laws, the presentation of resolutions, a plan for the completion of the organization by the election of governing bodies and executive officers.

CALL OF THE MEETING.

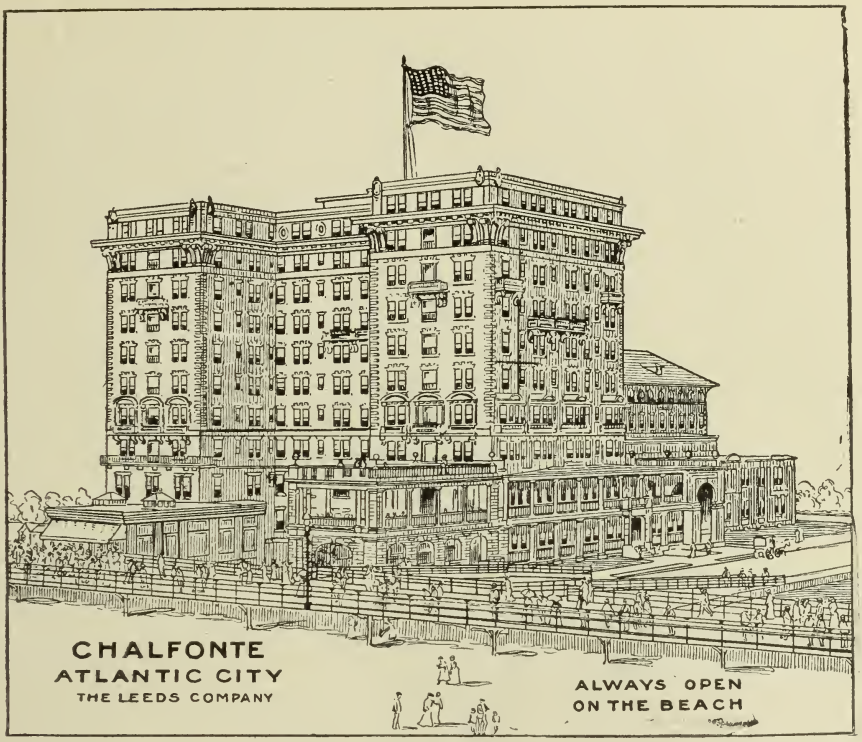
The men were called together by Edward Martin, Chairman of the Organization Committee, who called for the reading of the call of the meeting.

The call of the meeting was read by Franklin H. Martin, secretary of the committee. This call, which is herein quoted in part, summarizes the work for which the committee was authorized:

"First—It should formulate a minimum standard of requirement which should be possessed by any authorized graduate in medicine who is allowed to perform independently surgical operations in general surgery or any of its specialties.

"Second—It should consider the desirability of listing the names of those men who desire to practice surgery and who come under the authorized requirements.

"Third—It should seek the means of legalizing under national, colonial, State or provincial laws a distinct degree supplementing



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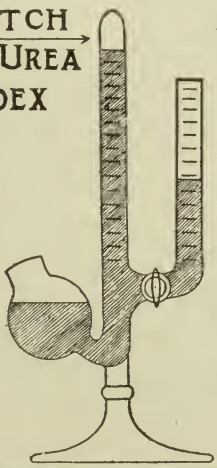

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the medical degree, which shall be conferred upon physicians possessing the requirements recognized by this law as necessary to be possessed by operating surgeons.

"Fourth—It should seek co-operation with the medical schools of the continent which have the right to confer the degree of M.D., under the present recognized standards, and urge these colleges to confer a supplementary degree on each of its graduates who have, in addition to their medical course, fulfilled the necessary apprenticeship in surgical hospitals, operative laboratories and actual operative surgery.

"Fifth—It should authorize and popularize the use of this title by men upon whom it is conferred, and its use should especially be urged in all directories of physicians in order that the laity as well as medical men can distinguish between the men who have been authorized to practice surgery and those who have not."

"The net result of the committee's efforts is that five hundred surgeons of all specialties, representing every large center of population, every important university city with a teaching faculty of medicine, every special and general society representing a specialty of surgery, all the important surgical clinics and hospitals, besides many independent surgeons from all portions of the North American continent, have consented to become founders of the organization under contemplation, and of this five hundred fully four hundred and fifty are here at this hour ready to fulfill their obligation."

The Founders' Organization was then completed by the election of Edward Martin as chairman and Franklin H. Martin as secretary and the authorization of an order of business.

BY-LAWS.

The interest in the by-laws centered in: 1. The name. 2. The object. 3. The forming of the organization. 4. Its administrative plans. 5. The meaning of the fellowships. 6. Fees. 7. Directory. 8. Expulsion. 9. Standing committees.

I. NAME.—The name of the corporation is the College of Surgeons.

II. OBJECT.—The object of the College shall be to elevate the standard of surgery, to provide a method of granting fellowships in the organization and to formulate a plan which will indicate to the public and the profession that the surgeon possessing such a fellowship is especially qualified to practice surgery as a specialty.

III. ORGANIZATION.—The corporation is to be known as the College. The College shall consist of all members of the corporation, to be known as Fellows, and shall vest the general management of the corporation in a Board of Governors, and the Board of Governors shall in turn vest the details of the management in a board of trustees, to be known as the Board of Regents.

IV. ADMINISTRATIVE PLANS.—1. The Board of Governors shall consist of the five hundred surgeons invited by the Organization Committee to serve as founders of the College and who have signified their willingness to act in that capacity. The individuals of the first Board of Governors shall also be known as the founders of the College of Surgeons.

This original Board of Governors shall be divided into three classes to serve one, two and three years. At the annual meeting

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in 1914, and at each succeeding annual meeting, the Fellows of the College shall elect fifty surgeons to membership in the Board of Governors, each for a term of three years. Thirty of these are to be elected from a list of nominations consisting of two members each nominated by the following surgical societies and associations of North America:

American Surgical Association, Section on Surgery of the American Medical Association, Section on Obstetrics, Gynecology and Abdominal Surgery of the American Medical Association; General Surgical Division of the Clinical Congress of Surgeons of North America, Division of Surgical Specialties of the Clinical Congress of Surgeons of North America, American Gynecological Society, Southern Surgical and Gynecological Association, Western Surgical Association, Section on Surgery of the Canadian Medical Association, American Association of Obstetricians and Gynecologists, American Orthopedic Association, American Association of Genito Urinary Surgeons, American Laryngological Society, American Ophthalmological Society, American Otological Society.

Twenty members shall be elected at large to represent surgeons of North America not affiliated with the above societies or associations.

The Board of Regents shall consist of twelve surgeons, members of the Board of Governors, elected by the Governors, these to be divided into three classes, whose terms of service shall expire in one, two and three years. Their successors shall be elected each for a term of three years. Not more than three of each class of four shall be elected from one country. The Board of Regents is increased to fifteen in number by three officers of the corporation, the president, treasurer and general secretary. The two vice-presidents are ex-officio members of the Board. The Board of Regents is the administrative body of the corporation, corresponding to a board of trustees in other corporations.

V. Fellowships.—The Fellows of the College shall be graduates in medicine who are legalized to practice medicine in their States and provinces, who have made an application for fellowship, such application to be endorsed by three Fellows of the College, one of whom shall be a member of the Board of Governors, and who meets the qualification requirements that shall, from time to time, be established by the Board of Regents, and who shall be elected to fellowship by the Board of Regents on recommendation of the Committee on Credentials.

All Fellows of the College shall be designated a Fellow of the College of Surgeons and shall be authorized and encouraged to use the letters F. C. S. after his name on professional cards, in professional directories and in scientific articles published in surgical literature.

VI. Fees.—An initial fee of Twenty-five Dollars shall be required of each member of the College on his election to fellowship by the Board of Regents. The annual dues will be Five Dollars.

VII. Directory.—The Board of Regents shall issue each year a directory containing the names and addresses of the Fellows of the College of Surgeons, arranged by States, provinces and colonies.

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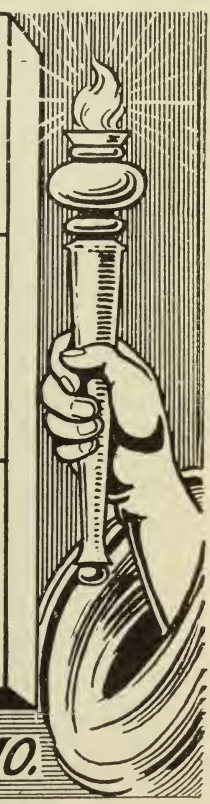

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VIII. Expulsion.—Any member of the College may be expelled for unprofessional or other conduct inconsistent with the rules and regulations of this corporation by a majority vote of the Board of Regents.

IX. Standing Committees.—The Board of Regents shall elect the following standing committees: 1, Credentials; 2, Legislation; 3, Graduate Schools and Hospitals.

These by-laws were unanimously adopted, with the provision that the Board of Regents make any minor corrections deemed desirable and present such corrections for adoption at the next meeting of the Board of Governors.

OFFICERS ELECTED.

President, J. M. T. Finney, Maryland; first vice-president, W. W. Chipman, Quebec; second vice-president, Rudolph Matas, Louisiana; treasurer, A. J. Ochsner, Illinois; general secretary, Franklin H. Martin, Illinois.

BOARD OF REGENTS.

J. M. T. Finney, Maryland; A. J. Ochsner, Illinois; Franklin H. Martin, Illinois; George E. Brewer, New York; George E. Armstrong, Quebec; John B. Murphy, Illinois; Edward Martin, Pennsylvania; F. J. Cotton, Massachusetts; Herbert A. Bruce, Ontario; C. F. Stokes, Washington, D. C.; William D. Haggard, Tennessee; George W. Crile, Ohio; Robert E. McKechnie, British Columbia; Charles H. Mayo, Minnesota; Harry M. Sherman, California.

SELECTION OF FELLOWS.

Much interest was manifested in the method to be pursued in the selection of the members of the corporation and in the method of conferring fellowships. A series of resolutions covering this subject were offered by the secretary and adopted.

The prospective fellows are to be divided into four classes, A, B, C and D. Classes A, B and C are by resolution to be admitted without the formality of submitting to an examination under the following resolution:

"*Resolved,* That the A class shall consist of founders of the College.

"The B class shall consist of the members of the special surgical societies constituting the Congress of American Physicians and Surgeons and one hundred each, nominated by accredited committees, from the Surgical Section of the American Medical Association, from the Section on Obstetrics, Gynecology and Abdominal Surgery of the American Medical Association, from the General Surgical Section of the Clinical Congress of Surgeons of North America, from the Division of Surgical Specialties of the Clinical Congress of Surgeons of North America, from the American Association of Obstetricians and Gynecologists, from the Surgical Section of the Canadian Medical Association, from the Southern Surgical and Gynecological Association and from the Western Surgical Association.

"The C class shall consist of surgeons of prominence of five years in the practice of surgery or a surgical specialty and who,

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in the opinion of the Committee on Credentials, are eligible for fellowship in the College without formal examination."

For all others, coming under Class D, the following resolution was passed:

"Be It Further Resolved, That the Board of Regents, through the Committee on Credentials, limit the admission of the Fellows to classes A, B and C until the Board of Regents formulates a standard of requirements for Class D and reports the recommendations back to the Board of Governors for approval at the meeting to be called by the Board of Regents in Chicago, November, 1913."

APPLICATIONS FOR FELLOWSHIPS.

It will be the spirit of this Association to open the fellowship to all competitors in surgery without favor. Scientific attainments, surgical ability, unquestioned moral character, measured by the College's standards, shall constitute the measure for fellowship.

There are many hundreds of surgeons on the continent who are not included in classes A and B who fall into the C class. Applications from these men will be welcome and their names will have the most careful consideration by the Committee on Credentials.

All applications for membership should be forwarded to the secretary of the corporation. It would add to the ease of the work of the Committee on Credentials if references in the way of vouchers or recommendations from one or more well-known surgeons accompany each application for fellowship.

FORMAL CONFERRING OF FELLOWSHIPS.

The first convocation for the formal conferring of fellowships will occur in November, 1913, at a time and place that will be designated later. The first directory of Fellows will be distributed at that meeting. For that reason the applications for fellowships on the part of A, B and C classes should be filed as promptly as possible in order to facilitate the correcting of lists for publication.

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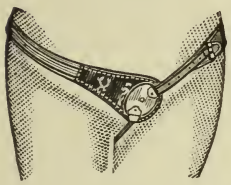

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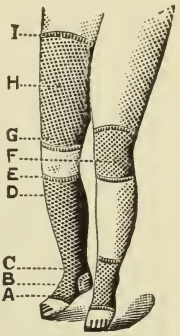

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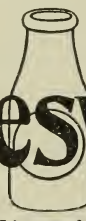

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This fraud, which was exposed at an action tried before the Supreme Court of Victoria at Melbourne, and others reported before in the medical literature, show that every physician should see that his patient gets exactly what he prescribed. No "just as good" allowed.

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THE ideal laxative or purgative is one that will produce as near physiological evacuation of the bowels as is possible without exciting excessive peristalsis. Such a laxative will accomplish its results in a natural manner without upsetting the digestive functions, causing griping or pain, or inducing reactionary constipation. That the medical profession have in Prunoids a laxative that presents these qualifications to a superlative degree is evident to the thousands of physicians who are using it day in and day out. They have found that Prunoids can be relied upon to stimulate normal secretion, increase the fluid content of the feces when deficient, and thereby bring about free and thorough elimination without irritation of the intestinal mucosa.

Hence it is that Prunoids have proven so valuable in treating the constipation or bowel torpor encountered in such diseases as neurasthenia, jaundice, anaemia, rheumatism, gout and all other affections where tonic stimulation of the functional activity of the bowels is so essential. Indeed, Prunoids exert so pronounced an influence on the physiologic processes of the intestines that the effects are often prolonged for several days. Thus Prunoids do not induce the cathartic habit, as do so many other laxatives, but can be relied

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Blaud's Mass in Liquid Form.

THE chief advantage of a preparation such as Lilly's Liquid Blaud, is due to the fact that it enables the physician to have the patient prepare extemporaneously, fresh ferrous carbonate at the time of taking each dose. This remarkable and unique peculiarity of Liquid Blaud also makes it a very delicate preparation and led some to think that it would be impossible to place it with the pharmacist for physicians' prescriptions. After considerable experimentation, what at first was thought to be an insuperable difficulty was neatly and effectively overcome, as will be explained. Special precautions have to be observed in bottling it, because the oxidizing influence of moist air on the hygroscopic glycerin solution containing the component parts of Blaud's Mass might easily cause deterioration.

In making Liquid Blaud, ferrous sulphate and potassium carbonate are first dissolved in anhydrous glycerin. The air in the bottles to be filled is replaced by carbon dioxide; a small amount of liquid petrolatum is introduced into each bottle and the glycerin solution of the iron and potassium salts is then poured into the bottles. The liquid petrolatum, being lighter, rises to the surface of the glycerin solution and forms a layer which excludes all atmospheric moisture.

At the time of taking a dose the bottle is shaken and the petrolatum is broken up into minute globules and thoroughly distributed throughout the glycerin solution, so that only a small portion is lost in pouring the dose. When the dose is mixed with water the two salts react and the fresh ferrous carbonate is formed, appearing as a flocculent greenish precipitate. After the bottle has been set at rest the petrolatum rises to the surface and forms a layer, so that the solution is again protected from the atmosphere. Thus by a very simple but ingenious device Eli Lilly & Co. made it practicable for the physician to give any patient the advantages of this very effective but delicate hematinic, provided a few simple directions are followed.

Lilly's Liquid Blaud has been steadily growing in popularity among physicians who find it advisable to prescribe iron, since it permits of the administration of carbonate of iron in its most assimilable form. Liquid Blaud is supplied plain, with arsenic, with strychnine and with arsenic and strychnine.

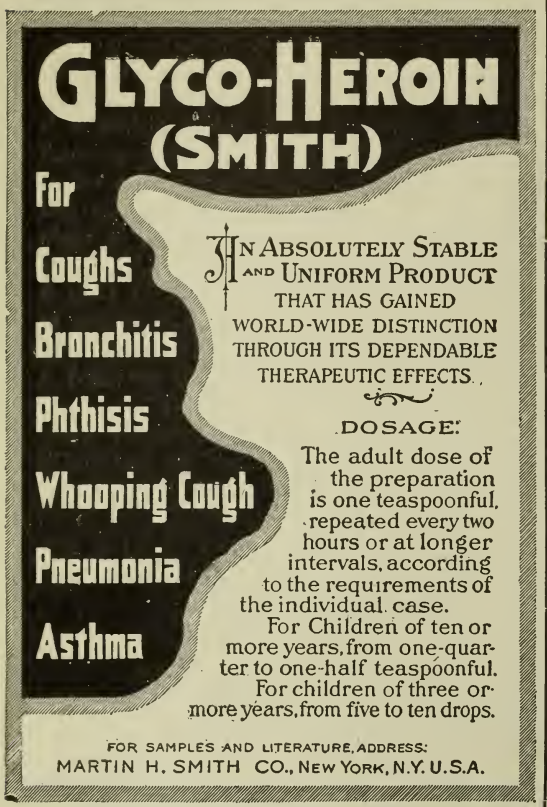
The Story of Indigestion.

AGAIN we turn to Hippocrates for our first knowledge of indigestion, in which he gave hot water for colics, black hellebore for vomiting, and advised the limitation of certain foods. It remained, however, for Paracelsus, in about 1500, to bring out the idea that putrefaction was an essential element of digestion. Borelli published the first book on Physiology about 1700, in which he described digestion, and said that health depended upon the reaction of the body fluids.

It was not until the nineteenth century that gastric juice from the hog was given internally, although Dr. Physick had used it for years in the treatment of ulcers. Dr. T. W. Ellsworth, of Hartford, Conn., was the first to try it internally. In 1851 he dissolved a piece of meat, lodged in a boy's throat, by giving a teaspoonful of gastric juice from a hog every hour. Pepsin and pancreatin were then imported, but to Reed & Carnrick belongs the honor of first making them in this country in 1862.—*When Did It Happen? Published by Reed & Carnrick.*

The Recovery From La Grippe.

SINCE the first appearance upon our shores of that unwelcome infectious disease known as La Grippe, the medical journals have been filled with articles advocating different methods of treating the attacks itself and its various com-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plications. But little attention, however, has been paid to the important question of how to best treat the convalescent subject. Among all of the acute infections there is probably none that is as likely to leave the patient quite as thoroughly devitalized and generally prostrated as does a sharp attack of La Grippe. For some reason the degree of prostration from grippal infection appears to be entirely out of proportion to the severity of the attack itself. This peculiarity renders is advisable and usually necessary to strengthen and support the general vitality of the patient during the period of convalescence. Complete rest, nourishing food, plenty of fresh air and stimulation according to indications are, of course, distinctly important measures. At the same time tonic and hematinic medication should not be neglected. Probably the most generally acceptable and efficient general tonic and hemic reconstituent for such patients is Pepto-Mangan (Gude), a bland, non-irritant and promptly absorbable combination of the organic peptonates of iron and manganese. This efficient blood-builder and reconstructive does not disturb digestion nor induce constipation, and is readily taken by patients of all ages.

The Constant Need for an Effective Tonic.

It is a fact not generally recognized, but very true, nevertheless, that the class of remedies most frequently used by the practitioner is that made up of the tonics or reconstructives. This is not so surprising, however, when we stop to consider that the great bulk of ailments which lead people to consult their physician have their origin in some depression, derangement or "falling off" in bodily vitality. Naturally, in instituting treatment for such afflictions, the practitioner seeks to stimulate faltering functions, increase the activity of weakened organs and restore all the energy he can to the whole organism. To do all this and produce permanent, not temporary, results requires a remedy that possesses beyond all question tonic and reconstructive properties.

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Bacterial Vaccine Therapy.

TREATMENT of infectious diseases with preparations derived from corresponding micro-organisms is unquestionably growing in favor. Not only do the bacterial vaccines (or bacterins) seem destined to a permanent place in therapeutics, but their field of applicability is constantly broadening. Proof of this is seen in the growing list of these products announced by Parke, Davis & Co., no less than 19 of the vaccines now being offered to the profession.

There are a number of reasons for the favor which is being accorded to the bacterial vaccines. In the first place, these products are in consonance with the scientific trend of present-

day medication. They are being used with a gratifying measure of success. The way in which they are marketed (sterile solutions in hermetically-sealed bulbs and in graduated syringes, ready for injection) appeals to the modern medical man, since it assures both safety and convenience. The moderate prices at which they may be purchased also tend to give them vogue.

Surgical Lore.

THE beginnings of surgery were coincident with those of medicine, much of it being done during the wars, for it is noted that Aesculapius and his two sons were at the siege of Troy. It was about 300 B. C. at Alexandria that the first human body was dissected, but public sentiment soon put a stop to it. Later, in fact, through the middle ages, the physicians were usually priests, and consequently could not shed blood, so until the days of Ambrose Paré, surgery not only made no advance, but had deteriorated. Formerly, in amputations, the blood vessels were seared with a red-hot iron, but Paré, "Father of Modern Surgery," first used the ligature.

The modern advance in surgery is curiously enough based on the achievements of three men, only one of whom was a surgeon: Simpson, who gave us chloroform; Morton, who gave us ether, and Lister, who introduced antisepsis.

It was in 1864 that Lord Lister first used the carbolic spray in the operating room over patient, surgeon, attendants and instruments, and one of the greatest terrors of surgery was removed.—*When Did It Happen? Published by Reçd & Carnrick.*

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IN the adjustment of diet to the particular requirements of the individual infant, constipation is often a prominent symptom that must be taken into account.

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Discrimination in Choosing an Anodyne.

THE exercising of more than ordinary care in choosing an anodyne, particularly in the case of women and children, is quite essential. This is all the more so when it is remembered what distressing after-effects follow the use of some anodynes.

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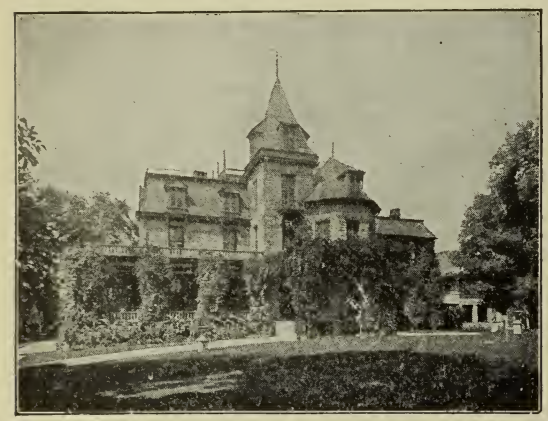

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Abstracts.

FURTHER OBSERVATIONS ON THE SURGICAL ANATOMY OF THE LARGE BOWEL.

By Granville S. Hanes, M.D., Louisville, Ky.

Read before American Practologic Society, June 16-17, 1913.

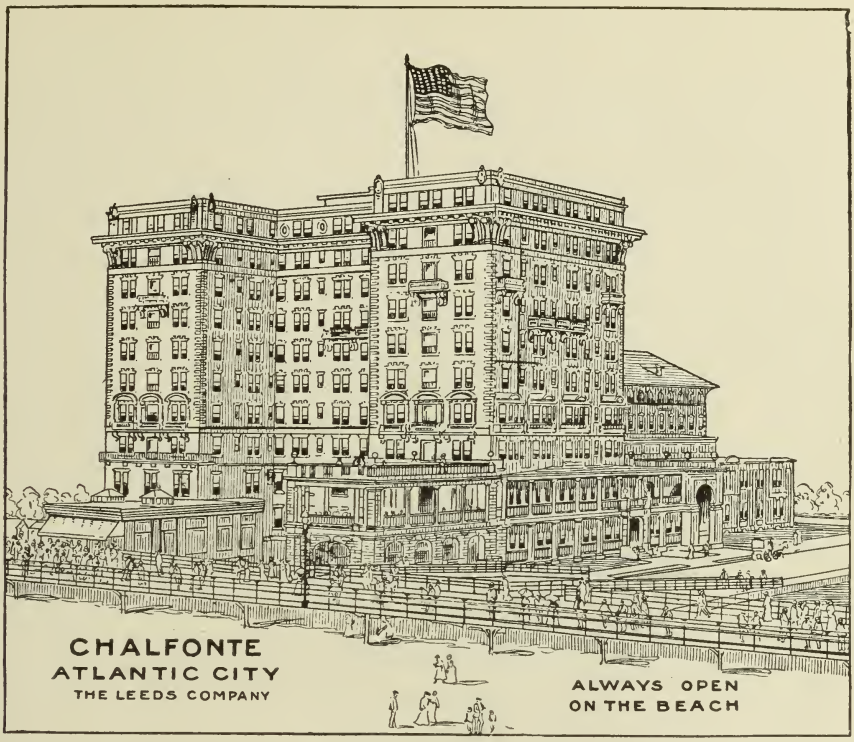
Few realize that the capacious portion of the colon is at its cecal extremity. The diameter of the average cecum is estimated at three inches, which is about the same as the rectum, though the cacum and ascending colon have a much greater capacity than the rectum and lower extremity of the sigmoid. The large intestine gradually decreases in size from the cecum to the rectum; the descending colon measuring one and one-half inches, or even less, at its narrowest point. These physical conditions explain, in a measure, the locality to which large quantities of fluids are transported when injected into the rectum.

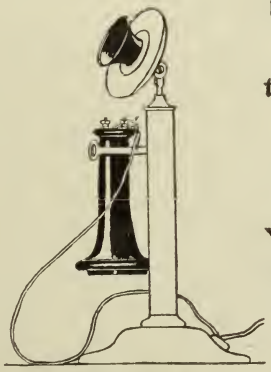
The question of anti-peristalsis in the large intestine in man is yet to be settled. It has been suggested that anastalsis may be inferred to exist in the proximal human colon, for the reason that rectal enemas have been observed to traverse the entire length of the colon, and escape through an artificial opening in the cecum. Also, because surgeons have attempted to stop a fecal-fistula discharge by transplanting the ileum into the transverse colon and sigmoid, but without success. The fact that rectal enemas have been seen to pass through the cecal fistula is, he is confident, little evidence of the operation of an anti-peristaltic force.

An ordinary colon tube was introduced two or three inches into the rectum of a dog, and through a funnel inserted into the proximal end of the tube was poured in bismuth-buttermilk, and by the X-ray the author observed it traverse the large intestine to the ileo-cecal junction with no sign of anti-peristaltic movements. Similar experiments were made on children with corresponding observations. He has seen a pint of bismuth in suspension, when introduced into the rectum of an adult, pass around to the cecum in a few minutes with no evidence of aid by anastalsis.

Under normal conditions peristalsis in the large bowel is a slow process, and it is no more than natural to suppose that anastalsis is also slow in its operation. The brief time, then, required for fluids to pass from the rectum to the cecum compels us to consider the influence of other and more potent agents on the intestinal contents. Two factors are in operation when fluids are conveyed from the rectum to the cecum. The first is the distensible and elastic nature of the intestinal tube, and the second is the hydraulic principle which controls fluids wherever they may be. If fluid is forced rapidly into the rectum, that organ will be seen to be widely distended; but this same fluid can be seen to make its way up the intestinal tube along the path of least resistance. The distended rectum, because of its elastic nature, presses upon the contents till every drop of fluid within its lumen is subjected to an equal pressure. So if additional fluid is forced into the rectum, the same factors will continue to operate.

If the ileum is transplanted into the transverse colon or sigmoid, the watery intestinal contents will be forced by the elastic intestinal tube in the direction of least resistence. The right segment of the colon is the capacious portion of the large bowel, so





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if fluids are under greater intestinal pressure in the lower bowel, the fluid contents will travel up to the cecum.

The author says that even if we do admit the existence of anastalsis in normal conditions of the colon, he does not believe it to be an important factor in conveying fluids from the rectum up into the colon.

Hanes had a series of three X-ray pictures made on the same individual to show what actually happens when tubes are introduced into the bowel. The first shows a 13-inch proctoscope introduced its entire length. The distal end is one inch above the umbilicus. The second shows an ordinary colon tube introduced its full length after the removal of the protoscope. The tube passed along the sigmoid up to the highest point (one inch above the umbilicus), and then turned upon itself, the distal end passing back into the rectum. The third radiograph shows the bowel injected with bismuth buttermilk, and the 13-inch sigmoidoscope introduced again. This picture shows that it is impossible to pass any instrument high up in a normal colon, except by the greatest accident. The sigmoil is lifted up into the abdominal cavity; its lower arm is occupied by bismuth and the metal tube; while the upper segment of the sigmoid is seen very distinctly where it has dropped back from a point opposite the umbilicus into the pelvis to its junction with the lower extremity of the colon. He claims the latter radiograph proves that it is impossible to pass a non-flexible instrument beyond the first half of the sigmoid.

To control the outflow of the fecal material in colostomies the author has found, in five cases operated since January of this year, that the hard rubber rod can be allowed to remain permanently, when used as in the Maydl operation. The opening in the intestine is above the rod. A thin gauze dressing is applied over the bowel, and a strip of gauze is thrown around the knuckle of the intestine, and overlying gauze is then tied under the supporting rod. The strip of gauze constricts both the upper and lower segments of the bowel, and exerts a most satisfactory control over these artificial openings.

THE ANO-RECTAL LINE—ITS CLINICAL SIGNIFICANCE.

By Collier F. Martin, M.D., Philadelphia, Pa.

Read before American Practologic Society, June 16-17, 1913.

After discussing the development of the anus and rectum, Martin states that the ano rectal line, or dentate border, has a very important clinical significance, in that it is the point at which both the blood supply and the nerve supply become differentiated. Above it the blood is carried by the portal circulation to the liver, while below it the blood stream mingles with the general circulation by way of the inferior vena cava. Above it the rectum is supplied only with visceral or sympathetic nerve fibers, while below it the anus and its surrounding structures are supplied with spinal nerves, and by sympathetic filaments. These spinal nerves carry sensory impulses common to nerves having specialized cutaneous nerve-endings.

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itching, formication and in alterations in spinal sense of touch and temperature, with their modifications, such as dryness and moisture. Stimuli producing these sensory disturbances show their presence by exciting motor contraction, or by inducing alterations in secretion.

Above the ano rectal line all of the specialized spinal sensations are absent, only the visceral sensations being present. In the rectum it is only pressure and muscle-sense that appeal to our consciousness. This sensation is translated in the brain into a desire for stool, which desire is inhibited or assisted voluntarily, as occasion may require.

Excessive spasm of the involuntary muscles supplied by visceral nerves produces an unpleasant sensation, which differs from pain of spinal origin, in that it is difficult to localize, and may be described more as an ache, which is difficult to bear and exhausting to the patient.

Lesions of the crypts of Morgagni, since they involve both the visceral nerve supply of the rectum and the spinal innervation of the anus, are associated with many disturbances of the reflexes.

Infection and malignant processes occurring above the dentate border tend to spread upwards, by way of the deep lymphatics, to the pelvic, or uro-genital, organs, or to the liver, via the portal system. Below the ano rectal line superficial abscesses result from infections of the proctodeum and the rectal crypts. Malignancy here is associated frequently with extension to the inguinal glands.

In general there is a marked tendency for pathologic processes to limit their invasion to the embryonic structure in which they began; the ano rectal line being the "great divide" between the ectodermic and the entodermic structures. Rectal infection and malignancy rarely extend below the dentate border, while anal pathology usually remains below this line and the levator ani muscles.

Ano rectal symptomatology is equally differentiated. The subjective symptoms of a pathologic process bear little relationship to the lesion, per se, but depend upon the interference with the functions of the spinal or sympathetic nerve supply of the tissues involved, whether this interference be mechanical, inflammatory or functional.

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Representatives of the science of medicine and surgery from every land under the sun will be present during the exposition to pay tribute to the doctor and incidentally to study the processes whereby the ravages of a disease-ridden zone were stayed and the camp of the canal builders became the abode of health.

The element that alone would lend a distinctive character to the exhibit is the featured presentation of the methods whereby the deadly mosquito was fought in his native haunts of morass and jungle; the application of specially-devised sanitary processes by which Dr. Gorgas and his men were victors in their struggle with deadly fevers, enervating malaria and others of the swarm of maladies that wait for men who penetrate those miasmic lands "where even the birds forget how to sing." A complete demonstration of these methods, as well as the equipment that, under man's uses, achieved success, will be installed for the advantage of the world by the United States Government. It will excite the interest not alone of the medical fraternity, but of all such nations as are interested in the colonization of the tropics.

The Emergency Hospital, another interesting feature of the exhibit in the department of medicine and surgery, scheduled in the exposition catalogue as "Group No. 35," will be a model emergency hospital, provided with its equipment entirely by exhibitors.

The law of averages works at expositions as elsewhere, and there will not be, even in 1915 in San Francisco, a suspension of the laws of gravitation, nor an annulment of the reactivities of cause and effect. Where a million people meet, there will be, in spite of all precautions to the contrary, cases of sickness, and the foolhardy will be subject to the usual percentage of disaster. Hence the necessity for an emergency hospital.

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Dr. R. N. Woodward, at present in charge of the United States Marine Hospital, situated near the Golden Gate, has been appointed by the Treasury Department to assume control of the emergency hospital at the exposition, and he has taken great pride

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It is not contemplated by the exposition's directorate that patients will be kept at the hospital over night, for it is to conform strictly to its classification as a hospital for emergency cases. If, however, the patient's health were to be jeopardized by removal to his home or to another hospital, he will not be removed.

The installation of the emergency hospital with the variety of the equipment thereof—from beds and stoves and other non-medical material to drugs, ether and operating tables and other essentially surgical or medical material—might cause a confusion in exhibits were the scheme worked out with less careful consideration of all the exhibitors. Wherever the display normally would fall, whether in the department of Liberal Arts or Manufactures and Varied Industries, there the exhibit will be actually considered. Surgical instruments in use in the emergency hospital will be regarded as in the Department of Medicine and Surgery in the Palace of Liberal Arts, and will there be subjected to competitive examination with the other exhibits, although manufacturers, judging by the applications for privileges of hospital employment of products, are not unaware of the greater advantage accruing to their exhibit when shown under working conditions. In any event, the jury of awards will be careful to consider that advantage, and will not let it prejudice the displays under glass cases in the Palace of Liberal Arts.

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FURTHER OBSERVATIONS ON SOME ANATOMIC AND CLINICAL RELATIONS OF THE SPHENOID SINUS TO THE CAVERNOUS SINUS AND THE THIRD, FOURTH, FIFTH, SIXTH AND VIDIAN NERVES.

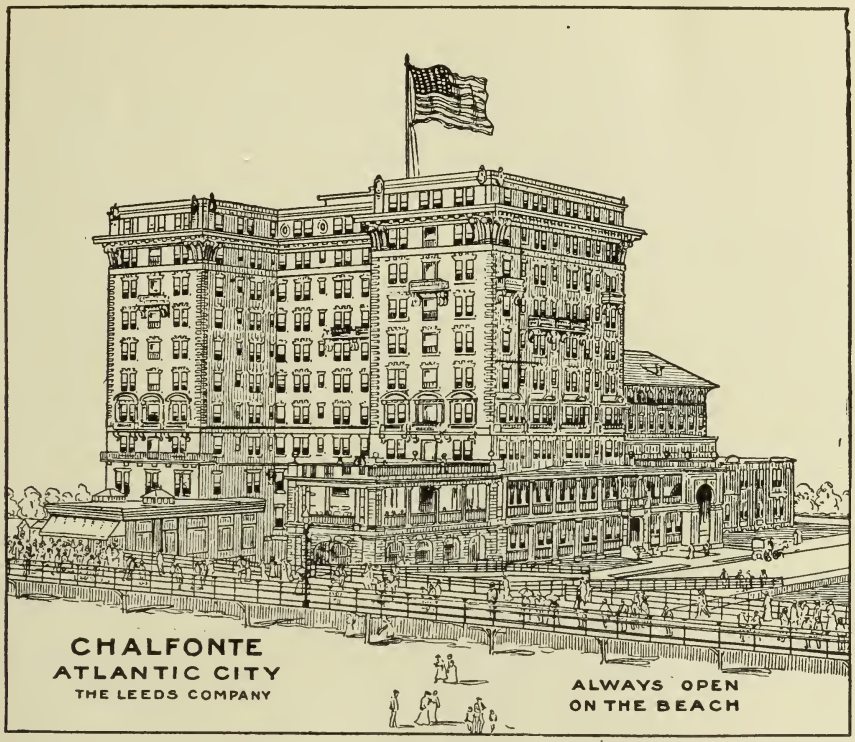
Dr. Greenfield Sluder, St. Louis.

Paper read at the Thirty-fifth Annual Congress of American Laryngological Association, held May 5, 6 and 7, 1913, in Washington, D. C.

In a previous communication (last May), in which the question was raised as to the etiology and treatment of migrain, Sluder made the statement that he believed that many (but not all) of the recurrent headaches which bear the name of migrain are sphenoidal empyemata which have lost most, if not all, local signs, or which were started as such empyemata, and that the nerve trunks had become involved either by extension of the inflammation (or its toxin) through the thin wall separating the sphenoid sinus from the adjacent nerve trunks. The results obtained during the past year in a goodly number of cases strengthen his belief in the correctness of the deductions detailed in that report.

Sluder observed that the third, fourth and three divisions of the fifth, sixth and Vidian frequently lie in close association to the sphenoid sinus, a deduction drawn from specimens which he studied by cross sections. His findings, with the exception of the Vidian nerve, were corroborated by Ladislaus Onodi (*Archiv. fuer Laryngologie,* Bd. VI, Heft II, July 10, 1912). This author's method was to follow the nerve trunks in certain specimens, sometimes to remove the wall of the sphenoidal sinus, and then to study the relations of the nerve trunks thereby exposed. He found that they were in these close associations for varying distances, sometimes even as much as 20 mm.

He did not consider the cavernous sinus in these relationships. He pictures specimens where the sphenoid sinus extended so close to the clivus of Blumenbach as to make transparency of the separating bone, and shows how this brings the sixth into these associations. From an inspection of Dr. Warren B. Davis' 145 Caucasian specimens showing the nose and accessory sinuses from the eighth week of fetal life to the twenty-fifth year uninterrupted (several specimens for each year, except the eleventh year), Sluder observed that the sphenoid sinus spreads laterally at an early age, reaching to close proximity to the second division of the fifth as early as two and one-half years, and that this condition runs almost constant throughout the series. Its development (Davis) begins in the anterolateral aspect of the body, and slowly extends backward, spreading, however, rapidly laterally to approach the foramen rotundum, and then proceeding backward. As early as the sixth year the Vidian canal may be approached. Sluder considers that if he is right in the conclusion that the mode of production of these headaches—the pathologic sequence—is the close association of the sphenoid sinus to the nerve trunks, and that the inflammatory processes are transmitted through the thin bone separating the cavity of the sphenoid from the associated nerve trunks, then it is necessary that such anatomic associations be formed in early life as an explanation of such head-



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aches beginning in early life. Another year of clinical observation strengthens Sluder's belief that the pathologic process underlying these cases is a hyperplastic sphenoiditis. From an observation of 100 cases he concludes that the second division of the fifth and Vidian are the nerves most frequently involved (95 per cent.). They may be involved singly, or together, then making the picture which would otherwise emanate from the sphenopalatine ganglion. It is difficult to differentiate this class of cases from sphenopalatine ganglion neuralgia; hence one should be carefully on guard. Since the previous communication three medicines have been tried for intrasphenoidal use: Iodid of potassium in water, 2 to 5 per cent., proved to possess nothing upon which its use may be recommended; it is apparently inert. One per cent. chlorotone in water proved to lack recommendations. The proprietary "cresatin" also failed to prove better adapted for these purposes than carbolic acid or oil of wintergreen. The medicines which have so far proved of greatest benefit are: One per cent. carbolic acid in oil; 2 to 10 per cent. oil of wintergreen and aqueous solutions of sodium salicylate, 2 to 5 per cent. These have been successful in allaying the pain long after the sinus was satisfactorily opened and the wound healed.

A FURTHER CONSIDERATION OF SIR CHARLES BALL'S OPERATION FOR INTERNAL HEMORRHOIDS.

By Alfred J. Zobel, M.D., San Francisco, Cal.

Read before American Practologic Society, June 16-17, 1913.

After a trial of this operation the author of the paper sums up his conclusions as to its value as follows: That, as a modification of the old ligature operation, it is better than the latter, and, at the same time, is far superior to the clamp and cautery operation, in that it takes care of and avoids the recurrence of that revoluted anal skin ring which generally becomes markedly edematous immediately after these operations, leaving behind skin tags after the swelling subsides.

In every instance in which the essentials of Ball's technique have been followed out carefully the author's results have been exceedingly satisfactory.

The operation is recommended.

DEDUCTIONS BASED ON AN ANALYSIS OF 3000 RECTAL CASES.

By T. Chittenden Hill, M.D., Boston, Mass.

Read before American Practologic Society, June 16-17, 1913.

The principal object of this tabulation of 3000 consecutive rectal cases was to furnish data as to the relative frequency of the various affections of the rectum and colon. There was a total of 1120 operations performed in this series, and some deductions of a practical nature were drawn from this experience. It was found that rectal ailments were more common among males than females, the ratio being three to two.

Hemorrhoids formed a large proportion—41 per cent. of the total. Next in frequency were abscesses and fistulae, 18 per cent., and the remaining disorders were tabulated as follows: Pruri-

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tus ani, 8 per cent.; anal fissure, 10 per cent.; colitis, 6 per cent.; prolapsus ani and procidentia recti, 3.7 per cent.; cancer of the rectum and sigmoid, 2 per cent.; benign growths, 1.5 per cent.; stricture, 1.5 per cent.; syphilis, 2 per cent.; constipation, 2.8 per cent.

Other miscellaneous conditions were recorded which made up but a fraction of 1 per cent., such as anal verrucca, congenital stenosis, patulous anus, pilo-nidal sinus, furuncles, foreign body, incontinence, coccygodynia, trauma, sigmoid diverticulitis, etc.

Editorial Comment.

ANTI-TYPHOID VACCINATION.

Southern California Practitioner.

An interesting brochure on this subject has been issued by our Federal Government under the caption, "Anti-Typhoid Vaccination in the Army and in Civil Life," prepared by Major F. F. Russell, M.D., of the Medical Corps, United States Army. A copy of this document was sent to the *Southern California Practitioner* by our Congressman, the Honorable W. D. Stephens.

Since the results of the campaign in the army against typhoid fever in Texas have become generally known, there has developed among the medical profession and the laity an active interest in typhoid prophylaxis by means of bacterial vaccines. Typhoid fever is the most common of the continued fevers, and prevails practically throughout the world. Imperfect sewerage, contaminated water supply, and contaminated milk supply are the most important ways in which it is distributed, although a large number of cases are spread by fingers, food and flies, either from the sick or from well persons who contain the typhoid bacillus in their intestines or urine, who are known as carriers.

Vaccination against typhoid fever has been employed in the British Army in India for a number of years, with considerable success, but for several reasons, one of which was the fact that the vaccine used was not as satisfactory as the improved vaccine now being prepared, it had not given entire satisfaction when administered to the troops sent to South Africa during the Boer War, and for some years its use was given up. Its administration was then begun again for British troops sent to India, but was entirely voluntary, and so was only accepted by a minority of the men. Its use in the United States Army began in 1909, also voluntarily, but it was not administered on a sufficient scale to influence the typhoid fever rate until the mobilization of the maneuver division in Texas in the spring of 1911, when it was administered to all officers and men. The anti-typhoid vaccine is prepared in the laboratory of the Army Medical School, at Washington, both for the Army and Navy, and to a considerable extent for other administrative departments of the Government. The result of the improvements in the technique of its preparation in this laboratory has been to increase its efficiency and to reduce the severity of the local and constitutional reaction of its administration.

The immunity established by these injections is not absolute. Thus, in 1911, among 80,000 persons vaccinated in the Army, there were 11 cases of typhoid with one death (due to intestinal hemorrhage) among the vaccinated; and in 1910, six cases among

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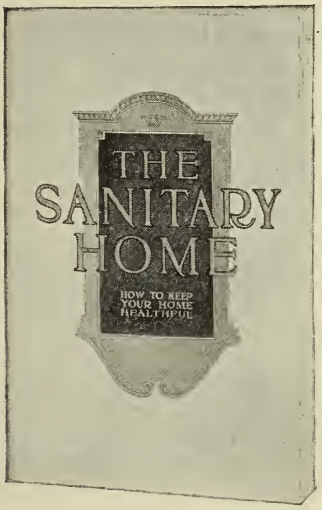

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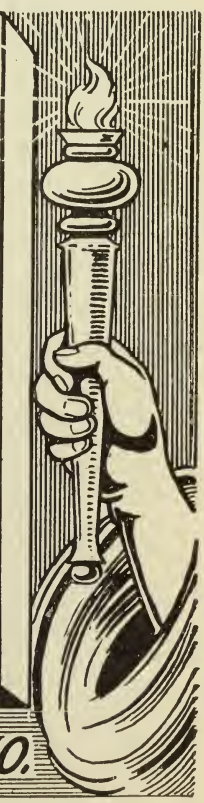

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the vaccinated with no fatalities. Had it not been for the prophylactic immunization there would have occurred, at prevailing rates of incidence, about 250 cases for the entire army. The fact that the immunity is not absolute is no objection to its use, but is rather an argument for its repetition at intervals, to be determined in the future as the lessons of experience become clear, just as we now do in the case of smallpox. It is the practice at present to revaccinate against both smallpox and typhoid at the beginning of each three-year period of enlistment. The failure to secure absolute protection in these few cases may be due to inefficiency of the vaccine, to exposure of the patient to exceptionally large quantities of infectious material, or inability of the individual to respond to immunization with the usual anti-bodies, a failure that can best be interpreted as a personal idiosyncrasy. With the limited number of doses of vaccine now used, we can never hope to raise the immunity high enough to protect against overwhelming doses of infectious material, and there are, no doubt, certain persons who cannot be perfectly protected against typhoid any more than against smallpox. We know that certain horses cannot be properly used for the production of antitoxin, and not all laboratory animals respond equally to immunization. However, in anti-typhoid vaccination we have a method for the prevention of disease that approaches in efficiency, if it does not equal, the protection against smallpox by vaccinia.

As to the feasibility of general inoculation. It is generally admitted by the opponents and more numerous lukewarm adherents of anti-typhoid vaccination that it is essential for the army and the militia of the several States in times of war and mobilization. Has it not, however, a field of usefulness in civil life in this country? It has been repeatedly shown that the incidence of typhoid fever is higher in hospitals than in the cities in which the hospitals are situated, and there is pretty general agreement that the medical and nursing staffs and employes should be vaccinated. For this same reason all who in any way come in contact with the sick should be immunized, since typhoid, like other exanthems, is contagious during the prodromal stage. In this group we may place the personnel of dispensaries, various charities and undertakers. Another large group comprises those who live in industrial villages, mining towns and isolated communities where the typhoid death rate is above the average. Workhouses, asylums, and especially schools, come in this category.

There is another large group of persons living under conditions simulating those occurring with an army in the field, although without the same sanitary safeguards. I refer to the camps of engineers, contractors and pleasure-seekers. Here, if anywhere, the use of the typhoid prophylactic would richly repay the time and trouble necessary for its administration. Its usefulness, however, is not limited to these classes of persons. The typhoid death rates for New York, Boston, Chicago and most other large cities in the North are low, varying from 4.7 in Bridgeport, Conn., to 17.5 in Philadelphia, and as long as the inhabitants of these cities remain at home they run little danger of contracting the disease. Remaining at home, however, is a thing most of us do not do; we send out patients, families, and go ourselves to the seaside and mountains, where the typhoid rate is five and ten times as

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high as at home. In the cities we depend on pure water, proper disposal of wastes, and the intelligent activities of an energetic municipal health department. In going into the country or traveling from place to place where the usual safeguards are lacking, why not avail ourselves of this form of individual prophylaxis which is efficient in all places and at all times?

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THE DOCTOR.

Memphis Commercial Appeal.

In London there was held a great world congress of doctors, and the ear of the medical profession has been eagerly open to the wise and helpful discussions that are being held.

The other day, at a banquet, one of the older physicians, a man whose hair had whitened in the service of suffering humanity, was asked his definition of a doctor, and, lifting his glass to the toast, he said: "A doctor is the man who prolongs life and makes death easy."

Was there ever a more beautiful definition given of those who follow the cause of healing? All the technical and scientific terms he might have strung together could not have so eloquently or so adequately expressed his meaning as that simple sentence. It is a word picture in two scenes. In the first we catch a glimpse of the doctor in his efforts to "prolong life"—forgetful of self as he answers the fretful cry of pain, battling with the fever fiend under the burning sun, or answering the call of the stork in the still hours of the night. The second picture shows him beside the sinking patient, tender-eyed, sure-handed, robbing death of its physical sting and speeding the parting soul on its last long journey.

This is the doctor described in the London speaker's toast, and he knows no bounds of nationality or climate; he is the same wherever he stands; if so, he is conscientious, steadfast of purpose, pitiful of heart.

Not the minister who watches over spiritual life needs more discretion or cleaner principles than this man of medicine, who, through his profession, tears the veil from family secrets and opens the guarded doors of "skeleton closets." To work intelligently he must be accurately informed, and so the most sacred secrets often come into his keeping. He is father-confessor, friend, counsellor, helper.

And yet this man, to whom the world turns so confidently in its hour of need, is the one it leaves waiting longest for his pay. The merchant, the grocer, the plumber, the butcher and the baker all get their money returns for service, for if they do not the service will cease. But the doctor is a humanitarian, and all the world takes advantage of the fact to impose upon him.

Surely "the man who prolongs life and makes death easy" is worthy of all honor and respect—and likewise of his fee.

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Abstracts.

FURTHER OBSERVATION ON PRURITUS ANI: ITS PROBABLE ETIOLOGIC FACTOR; RESULTS OF TREATMENT.

By Dwight H. Murray, M.D., Syracuse, N. Y.

Read before American Practologic Society, June 16-17, 1913.

Dr. Murray's paper, which is a continuation of his investigations on the etiology and treatment of pruritus ani, gave some new points which he had observed during the past year, and his additional experience in the treatment of patients. He found no reason for materially modifying his former reports, but has gathered data which helped to prove the correctness of his previous work. He found streptococcic infection in three cases of pruritus ani and vulva, and in four cases of pruitus that had involved the scrotum as well as the anus. These complicated cases improved, with the exception of two vulva cases, by the use of the vaccine treatment.

During the past year Dr. Murray has increased his former series of 32 cases by 25 additional cases, in five of which streptococcic infection was not found. These cases showed other infections, which still further proves the coccigenous nature of pruritus ani, and also demonstrates that other bacteria than streptococci may bear a casual relationship, as was hinted in his first paper on this subject.

His cases, so far as he has been able to determine, have not been affected by diet. Since Dr. Murray discovered the infection in pruritus ani he has never interfered with the food of any patient; neither has he restricted them in the smoking or drinking habit. The improvement under the vaccine treatment, without regard to eating, drinking or smoking, gives him additional proof for the bacterial theory.

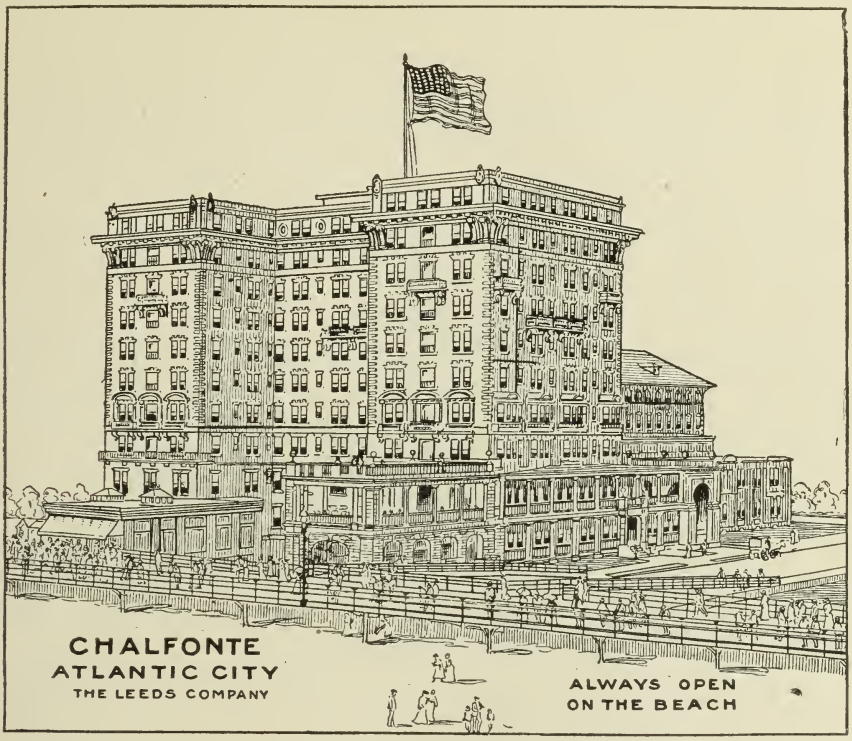
During the past year he has carefully investigated as to whether or not the itching extends into the anal canal beyond Hilton's white line, with the result that only in one instance did it extend beyond that point, and then only for a short distance.

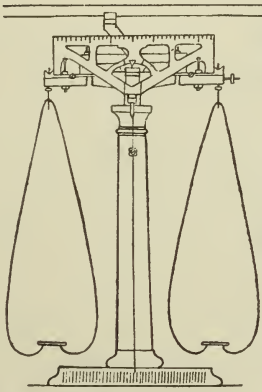
His investigations of the past year have given him additional proof that pruritus ani is not caused by any local lesion within the anal canal, and that when such lesions exist with pruritus ani they are coincidental.

In the cases that have been operated for local lesions the pruritus ani has not been permanently improved as a result of the operative procedure.

He said that rectal and general surgeons have observed many cases of fistulæ with discharges upon the anal skin, without puritus ani being present. The same is true of hemorrhoids, constipation and other rectal lesions, pruritus ani occurring in only a small proportion of such cases. He, therefore, still holds that when pruritus ani exists in connection with other lesions that it is a coincidence. In his 1912 report he gave a summary of 900 consecutive rectal cases wherein this fact was established fairly well.

He referred to the opsonic index, or, more properly, the coeffi-





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cient of extinction of opsonins, and claimed that much valuable information was to be gained by this test.

His work shows that if a complicating infection exists, and other bacteria than streptococci are found to be the sole invading organisms, we must use the corresponding autogenous vaccine. The opsonic index, following a bacterial diagnosis, is the proper method for determining this.

The results of treatment and the history of patients prove to him that if pruritus ani exists with local lesions which demand operation, that the prognosis depends upon whether a skin infection is present or not. If the skin infection is present, the local lesions may be cured by the operation, but the patient should not be led to believe that the pruritus ani will also be cured by it. Per contra, if a skin infection does not exist with a local lesion and itching, the prognosis may be that the itching will very likely cease with the cure of the local lesion.

After personal investigation in treating, watching results, noting how cause, effect and results dovetail together; comparing these investigations with statements and theories made in textbooks, and in articles appearing from time to time in medical journals, and containing no definite pathology or scientific reasons for cause and effect, Murray cannot understand how the profession will uphold such theories, rather than the bacterial theory which has been so well proved in his own cases and confirmed by other observers.

The uniformity of the bacteriologic findings is a strong support for the bacterial theory of the etilogy of pruritus ani. The chronicity of all the cases, the uniform symptoms, the similar conditions of the skin, the locality, the regularity as to the time of attacks, the uniformity of itching outside of Hilton's white line, the uniform blood findings as the coefficient of extinction of opsonius, and the fact that all local applications which have given beneficial results in the past have contained a strong germicide, all point directly to a common cause. Further confirmation is found in the uniformly good results of treatment with autogenous vaccine of the variety of bacteria against which the patient has a low phagocytic power, and in the lack of good results by the various haphazard methods of treatment in general vogue.

His reference to fissures in previous papers having been misunderstood by some, he desired to state that he had referred only to fissure-like cracks of the skin, and not to anal fissures or ulcers.

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Dr. Murray refers to a paper written by Dr. Jerome Wagner of New York city, published in the May number of the *Medical Review of Reviews,* in which Dr. Wagner reports some erroneous ideas claimed to have been gleaned from reading Murray's first two reports. Dr. Wagner, not having been able to confirm these reports, Dr. Murray pointed out the errors of technique in Dr. Wagner s work, as well as his errors in the interpretation of the reports.

Dr. Murray gave statistics in favor of his theory drawn from three years' original work on the subject; he also gave a summary of the results of treatment, showing the favorable clinical

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results with autogenous vaccines in a large majority of the cases treated.

He summed up his conclusions as follows:

(1) Results of the past year's work continue to uphold the correctness of the bacterial theory of pruritus ani.

(2) It is advisable to make a bacteriologic examination of all cases of pruritus vulva; also of cases of scrotal prurius.

(3) The co-efficient of extinction of opsonins is a valuable aid in diagnosis in complicated and obstinate cases.

(4) Pruritus ani in this series of cases rarely extends above the white line of Hilton, and it is still subjudice.

(5) The presence of a skin infection with a local lesion begets an unfavorable prognosis for the cure of pruritus ani by an operative procedure.

(6) The absence of a demonstrable skin infection and the presence of the local lesion, with pruritus ani, will justify us in making a favorable prognosis for the cure of the pruritus ani by an operative procedure.

(7) Pruritus ani, with such infection as we have demonstrated, and a lesion existing in the anus or rectum, according to his statistics, is a coincidence; and the latter lesion is not the cause of the pruritus ani.

(8) The sphincter muscle does not allow a leakage of rectal mucus upon the anal skin of one who has pruritus ani, except there is a patulous anus, any more than it does a normal individual who has no pruritus ani. The moisture of the parts is due to a low grade inflammation of the infected anal skin.

RESULTS IN A SERIES OF CASES OF TONSILLECTOMY AT THE MASSACHUSETTS GENERAL HOSPITAL, THRE TO FOUR YEARS AFTER OPERATION.

Dr. J. Payson Clark, Boston.

Paper read at the Thirty-fifth Annual Congress of American Laryngological Association, held May 5, 6 and 7, 1913, in Washington, D. C.

POSTALS were sent out in July, 1912, to patients who had been operated on in 1908, and 143 patients responded by presenting themselves to the clinic in person, where they were subjected to an examination, and answered a set of questions with reference to the operation and after-effects. From these results the following summary is presented: The patients, with a few exceptions, were under 15 years of age at the time of the operation. Hemorrhage after tonsillectomy calling for special treatment was of rare occurrence. The condition for which the tonsils were removed was relieved in nearly every case, even in those in which there was some tonsillar tissue remaining. An improvement of the general health was to be expected after tonsillectomy done for such cause. Children who had had tonsillectomy certainly showed no increased tendency to illness, and were probably less susceptible than before the operation. The present health of these children is excellent in the majority of cases. What is apparently tonsil tissue is found much more often than supposed after tonsillectomy. The soft palate was symmetrical, and the faucial pillars and tonsil fossæ normal in a great majority of the

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cases. The accidental cutting off of the uvula in four cases caused no bad symptoms. Most of the cases of sore throat and tonsillitis were relieved by the operation. In many cases in which there appeared to be tonsil tissue remaining the patients were in perfect health, and in others in which there were symptoms those were undoubtedly due in many cases to causes other than the tonsil remnants. The ordinary voice or speech may be said to be practically unaffected by tonsillectomy. No investigation was made of the singing voice. In most of the cases in which enlarged cervical glands could be felt there was tonsil tissue on the same side. In nearly half the cases in which there was tonsil tissue present there were no enlarged glands. Carious teeth were apparently a direct cause of some cases of cervical adenitis.

THYROTOMY FOR CANCER OF THE LARYNX, WITH REPORT OF ELEVEN CASES.

Dr. D. Crosby Greene, Boston.

Paper read at the Thirty-fifth Annual Congress of American Laryngological Association, held May 5, 6 and 7, 1913, in Washington, D. C.

In a paper presented to this association in 1906 we reported the results of an investigation of the lymphatic drainage of the larynx by means of submucous injections of methylen blue and mercury. The results obtained are confirmatory of those reported by others in showing that the network of lymphatic vessels which extends beneath the mucous membrane throughout the interior of the larynx is richer in the number and size of the vessels in the supraglottic region, relatively poorer in the subglottic portion, while on the vocal cords the vessels are very small and widely separated. These anatomic facts account for the slow growth and late development of the disease in the cervical lymph nodes in cases of epithelioma of the cords, and furnish an argument for the possibility of cure in early cases by the operation of thyrotomy and excision of the growth with a wide margin of healthy tissue. This is supported by the result of the operation in the hands of numerous operators, both in this country and abroad, so that at the present time it is almost universally recognized as the proper procedure for the treatment of early intrinsic cancer of the larynx. Certain details of the technic have an important bearing on the immediate and after-results of the operation. The steps of the operation are: 1. Ether by inhalation, preceded an hour before by ¼ grain of morphin and 1/150 grain of atropin. 2. With the head slightly extended a median incision is made, extending from the lower border of the hyoid bone to the lower border of the cricoid cartilage. This incision is carried down through the prethyroid muscles until the thyroid and cricoid cartilages and cricothyroid membrane have been definitely exposed. 3. A 1 per cent. solution of cocain is injected through the cricothyroid membrane into the cavity of the larynx. 4. The patient is now placed in the Trendelenberg position, and a thick pad placed under the shoulders to bring the larynx into prominence. 5. The cricothyroid membrane is next incised in the median line, and through this incision a swab of 10 per cent. solution of cocain is introduced and applied to the laryngeal mu-

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cous membrane. 6. The xyphoid cartilage, after a pause of five minutes, is divided from below upwards. In young subjects this may be done with a knife, but in the majority of cases where the cartilage has become ossified, it is best to use strong curved scissors with dull points. 7. The thyroid wings are now widely retracted, and an examination of the growth made under good illumination. 8. Beginning at the free margin of the thyroid cartilage, on the affected side in front of the growth, the internal perichondrium is elevated from off the cartilage with a sharp elevator from before backwards to a line well behind the limits of the growth, as well as above and below it. All the soft structures are thus freed from the underlying cartilage. 9. Parallel horizontal incisions are now made with scissors above and below the growth. These incisions are carried about one-half inch back of the posterior limit of the growth. 10. The growth, with its surrounding tissue, is now entirely removed with a wire snare by which the posterior attachments are severed. Much depends on the proper selection of cases. When the growth is so extensive, even though confined within the cavity of the larynx, that the larynx cannot be opened without cutting into the growth, recurrence is not only possible, but probable.

CONGENITAL OCCLUSION OF THE POSTNASAL ORIFICES, WITH REPORT OF A CASE.

Dr. Charles W. Richardson, Boston.

Paper read at the Thirty-fifth Annual Congress of American Laryngological Association, held May 5, 6 and 7, 1913, in Washington, D. C.

In July, 1912, a case came under my observation in which there was complete osseous obstruction of the postnasal orifices at as early a period in the life history of the patient as any observer has noted such a condition. In a search of the literature I have found only a few cases in which the obstruction was observed in infancy. While it is not possible to tabulate all the cases recorded in the literature, I judge that they do not exceed 100. The obstruction of the postnasal orifice may be membranous or osseous. The former are usually found posterior to the nasal cavities in the nasopharyngeal cavity, but lie in contact with the postnasal orifices so as to completely obstruct them, while the latter are usually placed within the chamber within a millimeter or more from the free border of the posterior nasal orifice. To these two forms may be added congenital atresias, by which the bones entering into the formation of the posnasal orifice become united, thus more or less completely obstructing the postnasal orifices.

The child that came under my observation in July, 1912, had marked difficulty in breathing. The child struggled for air, and the face became suffused and slightly cyanosed, the condition being relieved when the child began to cry. Whenever it ceased to cry there would be a recurrence of the difficult breathing. Examination demonstrated without doubt a deformity which was a complete obstruction of the postnasal orifices. By the end of the second week the child learned to maintain mouth breathing, and also learned to feed in a short time, and has developed in a normal manner. The question is: When is the proper time to operate? The marked success with this case seemed to favor the expectant surgical policy in these cases.

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Much is heard of Radium now-a-days in this country, but comparatively little concerning Radium Emanation. Whereas cancer treatment by means of Radium Rays is still largely in the experimental stage, the true value of Radium Emanation treatment for a large variety of internal diseases has been definitely ascertained. Its place as an invaluable ally in the fight against death and disease has been won, and the Radium Emanation Therapy has become firmly and permanently established in many countries.

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The origin of cancer is still unknown, but it has been conclusively proved (Professor Caan, Heidelberg Radium Institute; Dr. Lazarus Barlow, Director of the Cancer Department, Middlesex Hospital, London) that normal tissue is radio active, the more radio active the older the person is, which points to slow accumulation. Normal tissue in a carcinomatous person is more radio active than that in a healthy body. Carcinomatous tissue itself is still more radio active, this being borne out by the fact that for instance Professor Caan has been able to secure photographic impressions from ashes obtained from burned cancerous tumors.

Although as yet it is not certain that cancer has its origin in Radium deposits in the body, it is manifestly one's duty to be excessively careful in the internal use of this dangerous substance, hence Radium should never be introduced into the body by such means as injections, solutions, pills and capsules. The beneficial results obtained in internal medicine by thousands of physicians in many parts of the world by means of Radium treatment must not be misinterpreted, they have been derived through Radium Emanation, not through Radium Solutions. Radium Solutions, however minute their Radium contents may be, are very dangerous, for although a part of the Radium contents is excreted after a certain sojourn, the balance remains in the body and accumulates.

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Therapy

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This fraud, which was exposed at an action tried before the Supreme Court of Victoria at Melbourne, and others reported before in the medical literature, show that every physician should see that his patient gets exactly what he prescribed. No "just as good" allowed.

Prepare the Babies for Hot Weather.

DURING the month of June it is not a bad plan for the physician to take mental "stock" of the babies under his care, especially such as are bottle-fed, with the general idea of recommending such treatment as will tone up and vitalize those whose nutrition may be below par, so that they may enter the trying summer months in the best possible condition to ward off or withstand the depressing influences of extreme heat or the prostrating effects of the diarrheal disorders of the heated term.

Careful attention to feeding is, of course, a *sine qua non,* and the details of the infant's nourishment should be carefully investigated and regulated. But this is not all. Many bottle-fed babies are below standard from a hematologic standpoint. The marasmic anemic baby deserves special attention in the way of building up and restoring a circulating fluid which is deficient in red cells and hemoglobin. In the entire Materia Medica there can be found no direct hematic quite as suitable for infants and young children as Pepto-Mangan (Gude). In addition to its distinctly pleasant taste, this hemic tonic is entirely devoid of irritant properties and never disturbs the digestion of the most feeble infant. Being free from astringent action, it does not induce constipation. A few weeks' treatment with appropriate doses of Pepto-Mangan very frequently establishes suffi-

cient resisting power to enable the baby to pass through the hot summer without serious trouble, gastro-intestinal or otherwise.

Hay Fever and Its Serum Treatment—Pollantin.

A TEN-YEAR record of practical and highly satisfactory demonstrations of Dunbar's Serum Therapy would appear as a fitting occasion to repeat in part the history of hay fever and its theories:

1819—Bostock, an English physician, was the first to give a scientific and accurate description of the sickness. Bostock traced the ailment, whose periodic appearance he well recognized, to the first heat of spring or dazzling sunshine, to dust or similar atmospheric influences, which attack the eye. Inasmuch, however, as these influences are not bounden to the definite expressed time of the hay fever, this explanation could not satisfy.

1831—Elliotson accepted another moment as its solvent, crediting the pollen of certain plants as the excitant cause, obviously, to be sure, without founding same on actual proofs. Such were first brought to notice

1873—by Blackley, who pointed out that certain pollen, thus from rye and other grasses, whose presence in the atmosphere at time of the hay fever was established, were capable, by penetrating the mucous membrane of the hay-fever patient, to produce the typical symptoms.

This pollen theory, which today we have learned to be a correct one, was dropped by the soon-following development of bacteriology in favor, as first expressed by Helmholtz, of its bacterial cause.

Helmholtz, like other investigators, found in the mucosa of the patient vibrones and staphylococci which by their discoverers were accepted as the hay-fever excitant, although, obviously, no subsequent tests to prove this perception by bringing the bacterial culture to the sensitive mucous membrane were made. Again, other authors saw the causal agent as due to the aromatic or other volatile emanations from plants during blossom time.

1902—To these contradictory, and in part not subsequently tested conceptions, the work of Dunbar, associated with Prausnitz, Kammann, Weichardt, Kattein, Liefmann, Lubbert and others, brought complete clearing.

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To Lighten the Heart's Burden.

IN general practice few remedies are more commonly needed than a safe and reliable cardiac tonic. Not by any means a drug or remedy that will simply whip up and stimulate an organ that may already be laboring under a burden over-heavy for its capacity, but, on the contrary, a remedy that will impart new strength to the heart, and, by giving it new power and tone, relatively lighten the load it is carrying. Such a cardiac tonic is Cactina Pillets, a remedy that in the hands of thousands of competent physicians has been found one of the most valuable in the whole realm of therapeutics. In countless cases of cardiac diseases it has been employed with the most positive and gratifying results.

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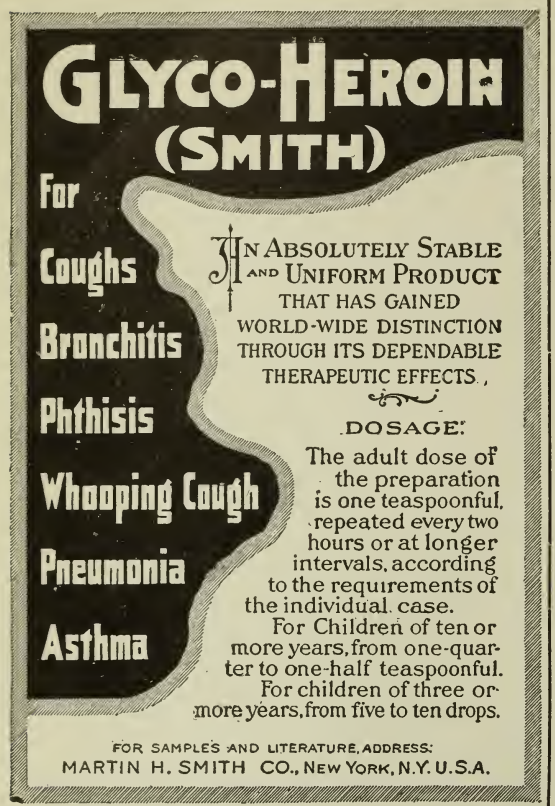
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THERE is undoubtedly an intimate relationship between putrefactive changes in the alimentary canal, caused by the growth of harmful microbes, and disturbances of the general health, as of the digestive organs, the kidneys, the heart and blood vessels, the brain and nervous system, etc. Intestinal antiseptics, it is believed, do not cleanse the digestive tract of objectionable bacteria and poisonous substances resulting from their growth, nor is purgative medication effective. The Bacillus Bulgaricus, administered in the form of tablets, is said, on the other hand, to be notably efficacious in such conditions. It is asserted

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Dr. Clement A. Penrose, of 21 West Mount Royal avenue, left on July 1 for Siasconset, Nantucket Island, where he will spend the remainder of the summer.

Dr. Joseph C. Bloodgood sailed recently for London, where he will attend the fifth annual session of the Clinical Congress of Surgeons of North America, which will be held in London, beginning July 27. Dr. Bloodgood will make two addresses, according to the official program. One of these will follow an address by Sir William Osler, who will discuss "Intestinal Stasis," after which Dr. Bloodgood wil speak on "The Surgery of Intestinal Stasis." The other address by Dr. Bloodgood will be on the "Treatment of Cancer."

Dr. Karl H. Van Norman, for the last two years chief admitting physician of Johns Hopkins Hospital, has been selected as first assistant superintendent of the hospital, to succeed the late Dr. Rupert Norton, who died a month ago. Dr. Van Norman, who has been visiting relatives in London, England, returned to this city July 27 to take up his new duties.

It was announced at the hospital that two members of the hospital staff have accepted appointments to the staff of the Leland Stanford Medical School of San Francisco. Those who will go are Dr. Henry A. Stephenson, resident obstetrician, and Dr. Frank Hinman, assistant resident surgeon. Dr. Hinman will go to California within a week, but Dr. Stephenson will not leave before November. Dr. Stephenson will be succeeded by Dr. Everett Dudley Plass, a former member of Johns Hopkins Hospital staff, who was called to a New York hospital. Dr. Ralph B. Seem, for the last two years in charge of the dispensary and third assistant to Superintendent Winford H. Smith, has been designated as second assistant, succeeding Dr. Van Norman as chief admitting physician.

MARRIAGES.

Francis Berger Trudeau, M.D., Johns Hopkins Medical School, '13, of Saranac Lake, N. Y., to Miss Eleanor Helen Garretson of Morristown, N. J., at Morristown, July 7, 1914. The ceremony was followed by a reception and wedding breakfast at Paul Smith's Casino.

DEATHS.

Samuel Claggett, M.D., University of Maryland Medical School, '98, of Petersville, Md., died from acute kidney trouble at the Maryland University Hospital July 9, 1914, aged 41 years.

Rupert Norton, M.D., for the last eight years assistant superintendent at Johns Hopkins Hospital, died of typhoid fever at the Hospital June 19, 1914, aged 47 years.

George Barr Scholl, M.D., Johns Hopkins Medical School, '02, of 1005 West Lanvale street, died of spinal meningitis on board a tug on its way to Baltimore from Solomon's Island July 9, 1914, aged 39 years.

Henry W. Webner, M.D., of 1427 West Lombard street, died from a complication of diseases at his home July 14, 1914, aged 62 years.

Evelyn Briggs, M.D., Johns Hopkins Medical School, 1900, died at his home in Sacramento, Cal., about May 4, 1914.

William Govane Ridout, M.D., College of Physicians and Surgeons in the City of New York, 1866, for several years a member of the board of governors and visitors of St. John's College, Annapolis, Md.; also a graduate in law, a veteran of the Civil War, in which he served in the United States Navy; once health officer of Annapolis; died at his home in that city June 29, 1914, from the effects of a fall down stairs, in which he fractured his hip, aged 78 years.

John M. Coonan, M.D., University of Maryland Medical School, '61, for two years health warden of the Ninth ward of Baltimore, assistant surgeon of volunteers during the Civil War, and for twenty years connected with the medical department of the army for Indian service, died at his home in Baltimore June 6, 1914, aged 79 years.

Calvin George Mohn, M.D., College of Physicians and Surgeons, '82, for four years postmaster at Laurelton, Pa., and for two terms a member of the General Assembly, died at his home in Lewisburg June 4, 1914, aged 59 years.

John W. Stewart, M.D., College of Physicians and Surgeons, '78, died at his home in Elmira, N. Y., May 25, 1914, aged 63 years.

Benjamin H. Todd, M.D., University of Maryland Medical School, '74, died at his home in Ridgeville, Md., April 23, 1914, aged 50 years.

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CONDENSED SCIENTIFIC INFORMATION FOR REPRESENTATIVES—NO. 6.

Subject: Typhoid Fever.

Occurrence.—Typhoid fever is a dangerous and widely distributed infectious disease, especially prevalent in the United States, where there occur annually 150,000 to 200,000 cases, with 20,000 to 25,000 deaths.

Cause.—Typhoid fever is due to the bacillus typhosus, or typhoid bacillus. This micro-organism is taken into the intestinal tract by means of contaminated food or water and locates in the intestinal lymphatic glands. Here it multiplies rapidly and, gaining access to the circulation, is carried throughout the body. While the principal point of infection usually remains localized in the intestines, severe lesions may occur in other organs, such as the liver, gall-bladder, pleura, meninges, etc. From the earliest stages of the disease the typhoid bacilli can be obtained from the blood, and this fact is taken advantage of for diagnostic purposes (as will be explained in a later paper dealing with diagnostic tests).

Preventive Immunization.—That persons may be made immune from typhoid fever has been proven conclusively by the results secured with Typho-Bacterin in the armies of the various countries, as well as in civil communities. The procedure is, of course, based upon the observation that one attack of typhoid fever usually confers upon the individual a permanent immunity against a subsequent attack. Within recent years it has been discovered that immunity from any infectious disease is due in greater part to certain protective properties (antibodies) found in the blood of the immune individual. The stimulation of the production of these protective substances is brought about by the injection of Typho-Bacterin or Typho-Serobacterin, and the individual is thus made immune from the disease.

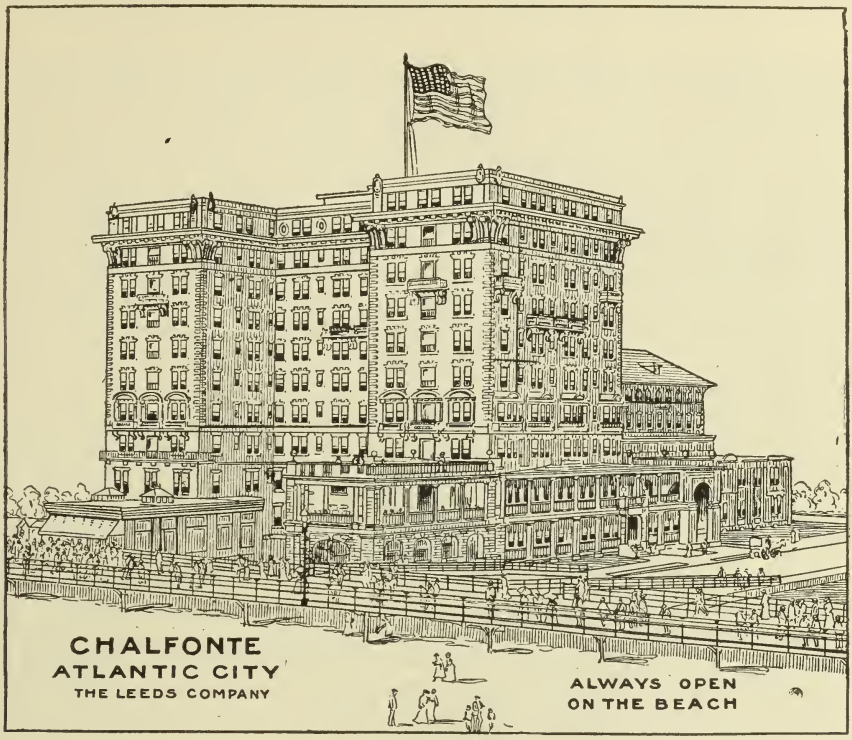
Bacterin to Use.—Typho-Serobacterin is preferable because of the absence of reaction following its use and the rapidity with which immunity is secured. It is a suspension in sterile physiological saline solution of killed typhoid bacilli, sensitized by special treatment with specific immune serum (as explained in the paper on Serobacterins). 0.25 per cent. trikresol is added for preservation.

In the suppression of epidemics the Typho-Serobacterin should be preferred, as by its prompt action it is possible to head off infection within twenty-four hours, instead of the five to eight days required when the ordinary bacterial vaccine is used.

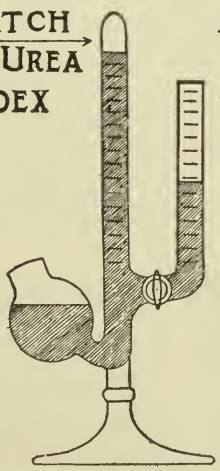
How to Administer.—For preventive immunization the three-syringe immunizing package should be employed. The contents of the syringe labeled "First Dose" is injected subcutaneously. The "Second Dose" and "Third Dose" are administered at intervals of six to seven days. This constitutes the complete immunizing treatment. The usual site of injection is the arm at the insertion of the deltoid muscle. Before inserting the needle the skin should be thoroughly cleansed and painted with tincture of iodine.

Dosage for Children.—With the ordinary bacterin Russell* advises that the dose be reduced for children according to weight, considering the average adult to weigh 150 pounds. This state-

*Frederick F. Russell, M.D., Major in Medical Corps, United States Army, and professor of bacteriology in Army Medical School, Washington, D. C.



WATCH the UREA INDEX



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ment is based upon records of immunization of 359 children between the ages of two and sixteen years, immunized by fifty different physicians in many parts of the United States. Where the serobacterin is used it is generally deemed unnecessary to diminish the dose.

Contraindications.—Antityphoid vaccination is generally considered harmless. It is estimated that about 200,000 men have already been immunized with the bacterin used in the United States Army and Navy without a single fatality or serious complication. The number of people having availed themselves of this protective measure in civil communities is nearly as large, and no untoward effects have been reported. In the army the injections are not given to any but healthy persons; if there is any doubt as to possible illness, the treatment is postponed until a diagnosis can be made.

Symptoms Following Administration.—When the ordinary bacterin is used there frequently occurs an inflammation surrounding the site of injection, and accompanied by a rise of temperature and general feeling of illness. This passes off within twenty-four to forty-eight hours. It is believed to be due to the slow dissolution of the killed typhoid bacilli, which results in the liberation of certain toxic products. Typho-Serobacterin, being sensitized, is more rapidly acted upon by the body cells, and the poisonous portion is split up into harmless substances before it can attack the tissues. For this reason the local and general reaction following the use of Typho-Serobacterin are very slight or entirely absent.

Duration of Immunity.—The maximum duration of immunity following antityphoid immunization has not been ascertained. It is believed, however, that a substantial immunity is present in the great majority of cases during the first year and a half, and the degree of immunity present for a long time after is sufficiently effective to prevent infection under ordinary conditions. It is the custom in the army to reimmunize against typhoid fever at the beginning of each four-year period of enlistment. According to Major Russell, this is not because the immunity has disappeared, but to be certain of the maximum of protection among the soldiers. Reimmunization every three years is probably sufficient in civil life, but the immunity should be reinforced if the individual is exposed to infection, as in epidemics, etc.

Accumulated Evidence Regarding the Value of Protective Immunization.—The best example of the effectiveness of antityphoid vaccination is found in the statistics accumulated in the United States Army. During the Spanish-American War, in 1898, in the camp at Jacksonville, Fla., there were over 2500 cases of typhoid fever among the 10,759 troops—nearly one-fourth of the soldiers being attacked, with 248 deaths. Preventive immunization was begun in 1909, and in 1911, in the camp at San Antonio, Tex., which comprised 12,801 men living under the same conditions as prevailed at Jacksonville, there were only *two cases* of typhoid fever and *no deaths.*

Antityphoid immunization was made compulsory in the United States Army beginning September 30, 1911, and in the United States Navy January 1, 1912. The case rate per thousand in the United States Army fell from 3.03 per thousand in 1909 to .26 per thousand, a reduction of over 90 per cent.; and the mortality rates fell from .28 per thousand to 0.3 per thousand, a reduction of nearly 90 per cent.

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Immunization in Civil Life.—Antityphoid immunization should be extensively employed wherever there is a possibility of typhoid infection. It is of especial importance to physicians, nurses, employes in hospitals, and persons who are compelled to live under unhygienic conditions, as in mining camps, etc. Typhoid infection very frequently attacks persons residing in cities who go to the country or seashore, where the typhoid rate is many times higher than in the cities. One of the most important fields of usefulness for antityphoid (vaccination) is the protection of young people, as the disease is particularly prevalent below the age of thirty. In the registration area of the United States, in 1909, there was a total of 3366 deaths in patients under twenty years of age out of a total of 10,722 of all ages. These deaths were distributed according to ages as follows:

Under 2 years	97
Under 3 years	139
Under 4 years	132
Under 5 years	110
5 to 9 years	647
10 to 19 years	2174

It is evident, therefore, that antityphoid vaccination should be made universal in persons under 21 years of age in civil communities.

Typho-Serobacterin Mulford Immunizing is supplied in packages of three syringes, graduated as follows:

First dose.....1000 million killed sensitized typhoid bacilli.
Second dose.....2000 million killed sensitized typhoid bacilli.
Third dose.....2000 million killed sensitized typhoid bacilli.

Both Typho-Bacterin and Typho-Serobacterin are also effectively employed in the treatment of typhoid fever. This subject will be discussed in our next paper—No. 7.

Abstracts.

THE FAUCIAL TONSIL AS A FOCUS FOR SYSTEMIC INFECTION.

Dr. George E. Shambaugh, Chicago.

Paper read at the Thirty-fifth Annual Congress of American Laryngological Association, held May 5, 6 and 7, 1913, in Washington, D. C.

FORMERLY it was assumed that sore throat occurring in connection with acute rheumatism was but a local manifestation in the pharynx of the general systemic infection. It is now generally believed that sore throat in these cases represents the focus of entrance for the systemic infection. Furthermore, it is generally recognized that sore throat, for the most part acute tonsillitis, is very often the immediate cause for other systemic infections, such as acute endocarditis and acute nephritis. It has not been so generally appreciated that the faucial tonsils are very frequently the foci for chronic systemic infections, such as chronic arthritis, chronic neuritis, cardiovascular degeneration and chronic nephritis. The general practitioner, as well as the specialist, has not fully appreciated the importance of the relation existing between

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infections, acute as well as chronic, of the faucial tonsils and certain systemic conditions. Very frequently in ill-nourished children the removal of the tonsils results in such an immediate and astonishing improvement in general health that it can hardly be accounted for except on the assumption that the enlarged harmless-looking tonsils contained foci for a mild systemic infection. In many of the tonsils there are dilated crypts containing the characteristic cheesy deposits which from time to time produce acute infection. The small tonsil embedded under a fold from the anterior pillar, and the tonsil with a deep horizontal fissure separating the upper from the middle thirds, are unusually susceptible to acute infections, and are especially predisposed to the development of latent foci capable of causing systemic infections. Another type of faucial tonsil which is a frequent source of systemic infection is the stub remaining after partial removal, or where the tonsis has been subjected to igni puncture or surface cauterization. The treatment of a faucial tonsil suspected of harboring foci of infection is the same as such foci elsewhere in the body, namely, through removal of the suspected foci.

TREATMENT OF FISTULA IN ANO.

By J. A. MacMillan, M.D., Detroit, Mich.

Read before American Practologic Society, June 16-17, 1913.

THERE are three essentials for the operation for this condition:

(1) An incision that will open up every ramification of the fisculous tract.

(2) The excision of the fibrous tissue which forms its walls.

(3) Free drainage and a regulation of the granulation by means of pressure by gauze packing.

REPORT OF A CASE OF ULCERATION OF THE LARYNX, PERICHONDRITIS OF THE ARYTENOID CARTILAGES, ABSCESS AND PARTIAL EXFOLIATION OF BOTH CARTILAGES RESULTING FROM TYPHOID FEVER.

Dr. J. H. Bryan, Washington.

Paper read at the Thirty-fifth Annual Congress of American Laryngological Association, held May 5, 6 and 7, 1913, in Washington, D. C.

This case is reported in order to emphasize the importance of making regular and systemic examinations of the upper air passages, especially of the larynx, in all cases of typhoid fever, in order to detect the early changes that take place in the mucuous membrane of the upper air passages in this disease. The frequency of this complication in typhoid fever in Europe, according to Landgraf, is 11 per cent. of all fatal cases; according to Griesinger, 26 per cent.; Kanthack, 26 per cent.; Ouskow, 30 per cent. It is difficult to arrive at any conclusion as to the comparative frequency of this complication of typhoid fever in this country and abroad. The figures given by Jackson seem to show that a much larger number of cases of laryngeal involvement occur in this

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country than is indicated by the figures givey by Thompson. The epidemic in which Jackson made his observations was, however, an unusually severe one, and the subjects were largely of a poorly nourished type, and this may account for the apparently greater frequency of this complication in this country. We cannot get at the truth in this matter until more careful observations are made, not only in the hospitals, but in private practice as well.

Excerpts.

CHESTNUT TOXEMIA.

On account of the alleged epidemic of poisonings and deaths from the eating of chestnuts affected with chestnut blight, an investigation was made by C. Dwight Marsh, Physiologist of the Drug and Poisonous Fluid Investigations Office of the Department of Agriculture at Washington, who reports (*Journal A. M. A.,* July 4, 1914), the result of the examinations in Massachusetts and New Hampshire. These resulted, in fact, in demonstrating that there was no case of poisoning that could properly be attributed to this cause. It is well known that raw chestnuts are not very digestible, and some persons have an idiosyncrasy that may render their taking any quantity of them harmful. Most of the detailed symptoms of the cases reported can be accounted for in this way. Feeding experiments on a monkey, white rats and rabbits were entirely negative as regards any harmful effects so far as the nuts from blighted trees were concerned, and the conclusion was drawn that they were no more harmful than those from healthy trees.

GYNECOLOGY AND OBSTETRICS.

In his presidential address delivered before the American Gynecological Society J. Whitridge Williams, Baltimore (*The Journal A. M. A.,* June 6, 1914), criticizes the backwardness of American obstetrics as far as original work is concerned, in an analysis of the published papers presented to the society. He says: "Careful analysis of our transactions has failed to convince me that scarcely a single fundamental contribution to practical obstetrics has been made to this society, and I feel that you will agree with me when you hear the facts." The proportion of papers that he classes as good or excellent contributions is, according to this showing, lamentably small. The lack of productiveness cannot be due to lack of ability of the individual members, but is due in his opinion to (1) the tendency to regard the practice of medicine as an engrossing financial pursuit, (2) to defective ideals and tendencies in medical education, and (3) to the divorce in this country of gynecology from obstetrics. One of the most important factors is our medical education systems, and he asks: How many of us who hold professorships can truthfully say that we are held to the same accountability as heads of true university departments? In most of our schools the chair of obstetrics is the most poorly equipped, and considered only after the others. Lastly, he hopes to see a broadening of the sphere of gynecology to include that of obstetrics as well.

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WHILE Mixed Infection Phylacogen was formally introduced to the medical profession in 1912, it was some months later before adequate data as to its value in the treatment of hay fever were available. In 1913 hundreds of cases were reported, details of many of them appearing in the medical press during the latter months of that year. The results from these clinical observations were highly significant, showing a surprisingly large percentage of recoveries and warranting the belief that in Mixed Infection Phylacogen the physician had acquired a formidable weapon for his fight with one of the most stuborn diseases that he is called upon to treat.

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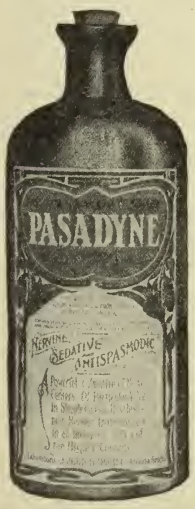

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Madison, O., May 13, 1913.

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I have recently treated Mrs. C———, aged 49, who was using 20 grains of morphine per day, and had been for the last eight years, with Dr. Quayle's Three-Day Drug and Liquor Treatment. The results were very satisfactory; in fact, before the three days were up the craving for morphine was gone. She suffered no pain, had no delirium, and as soon as her shattered nerves were restored to health she was a well and happy woman. I heartily endorse and recommend Dr. Quayle's Treatment to all physicians having patients needing same.

Very truly,
(Signed) Wm. Snearer, M. D.

Ashtabula, O., April 9, 1914.

Dr. C. H. Quayle,
Madison, Ohio.

Dear Doctor—Enclosed find check for twenty-five dollars ($25.00) for first shipment. As far as I can see, all results are splendid.

Respectfully,
(Signed) J. J. Hogan, M. D.

Geneva, Ohio, April 24, 1914.

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Respectfully,
(Signed) Z. O. Sherwood, M. D.

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Drug Treatment of Diabetes.

In the treatment of diabetes mellitus opium, of course, has long held first place among therapeutic agents. In the hands of many physicians Papine (Battle) has produced identical results with those derived from the administration of opium or codeine. The employment of small doses at the beginning, and thereafter increasing until the required effects are produced or until narcotic symptoms are exhibited, when the dose will be held stationary or reduced, is the practice usually followed.

A Dependable Preparation of Ergot.

Ergot is undoubtedly one of the most complex drugs in our materia medica. Each analyst endeavors to prove that the principle that he has isolated is the active principle of the drug, and that all others in ergot are subsidiary. The natural result is that the chemistry of ergot is a history bristling with optimism, pessimism and numerous contradictions. In all probability the fact is that it is in the natural combination of all of these active principles that the ideal ergot efficiency is made possible. Certain it is that none of the principles thus far isolated will, when given as an individual agent, produce the full therapeutics of ergot in its entirety. It is, therefore, of vital importance to have a reliable, standardized preparation that will represent all of the active principles of the drug. Among other desirable features of the ideal preparation of ergot are palatability, concentration, miscibility, permanency and suitability for safe subcutaneous use. The only preparation that seems to meet all of these requirements is Ergotole (S. & D.).

Bacillus Bulgaricus in Gastro-Intestinal Diseases.

The method of treating intestinal infectious processes by implantation of the bacillus lactis bulgaricus appears to be growing in favor with American practitioners. Clock's experience in upward of a hundred cases of infantile diarrhea at the Babies' Hospital of the City of New York, as related by him in the *Journal of the American Medical Association* of July 19, 1913, has undoubtedly played a considerable part in focusing attention upon bacillus bulgaricus therapy. In the instance referred to,

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117 cases were treated by the out-patient department staff of the hospital, under Clock's personal supervision. Of this number 116 recovered, the one death occurring in a severe case of enterocolitis which had persisted for two weeks before treatment began. Noteworthy among the results of the treatment were the gain in weight by the patients, despite the number of stools; the rapid change of the stools to yellow; the rapid subsidence of fever; absence of mucus and blood from the stools at the end of 48 hours. "The implantation method of treatment," declared the author, "has progressed beyond the experimental stage, and the results of its use can no longer be questioned or disputed. The treatment has proved of practical, clinical and scientific value, and its simplicity should appeal to every practitioner."

Parke, Davis & Co. offer bacillus bulgaricus (a pure culture) in tablets, the form used by Clock and others in the treatment of gastro-intestinal diseases, numerous cases of which have been reported in the medical press. Physicians will do well to write them for literature.

Phillips' Wheat Phosphates.

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(Representing phosphates similar to those in Wheat).

A Constructive in Nervous and Wasting Diseases.

Tonic—Stimulant—Nutritive.

A preparation of the phosphates of potash, magnesia, lime and iron. Recommended as furnishing those elements necessary for the restoration of exhausted brain or nerve power.

Food is often taken to gratify the palate, regardless of nutrient value or systemic requirements. Bread, as an example, according to Liebig:

1000 pounds wheat contains 21 pounds of phosphates.

1000 pounds flour contains 5½ pounds of phosphates.

Showing that in the manufacture of superfine white flour phosphates are thrown away with the bran; yet it is generally conceded that the phosphates play so important a part in the animal economy that an insufficient supply in the daily food is the cause of many ailments.

Immediately following continued nervous strain or active mental effort the excretions show a larger proportion of phosphates than ordinarily. If the food, deficient in phosphates, is unable to restore this waste, it must be supplied from other sources, or disorder ensues.

Phillips' Wheat Phosphates (representing phosphates similar to those in wheat) are offered to supply this deficiency, and have been found of benefit in nervous affections, mental and physical prostration, sleeplessness, digestive disorders, anemia and marasmus, for nursing women, in debility and failing appetite, and in diseases generally resulting from defective phosphatic nutrition. Brain workers find it of benefit. This preparation is being prescribed with satisfactory results as a grateful adjuvant during fever and convalescence therefrom.

This preparation is also put up in syrup, with flavoring (Phillips' Syrup of Wheat Phosphates), making it desirable where the taste is capricious, and presenting a superior excipient for the combination of other medicinal agents.

Mechanical Treatment of Constipation.

The great value of perfect elimination through the bowels in preserving the equilibrium of the various functions has been much emphasized by many authorities, and evidence is at hand to support the view that relief of intestinal stasis is the key to the situation in many cases of chronic ill-health.

The reports to date on the use of heavy Russian mineral oil in stasis are very encouraging, and its use as a lubricant seems very rational, especially in those cases due to lack of proper secretions and dryness of fecal contents.

Petrono (Lilly) is a highly refined Russian mineral oil of high specific gravity. It is superior to our American product, is free from fluorescence, and practically odorless and tasteless. It acts purely in a mechanical way, and is not absorbed from mucous membranes. Petronol cannot decompose in the bowel nor tax the liver; in fact, it is the most perfect mechanical lubricant for the bowel of any agent yet employed for that purpose. It is supplied through the drug trade, plain and aromatized. Send for sample and brochure to the home office, Indianapolis.

The part that the nucleus plays in the development of the cell was discovered by Schleiden in the early thirties, and was corroborated by Schwann at that time, an interesting account of this being found in Victor Robinson's "Patnfinders in Medicine." The cell contents, which he called gum, were carefully worked over by others, each decade finding some new feature, until in time it was pronounced the essential substance of all living cells.—*When Did It Happen? Published by Reed & Carnrick.*

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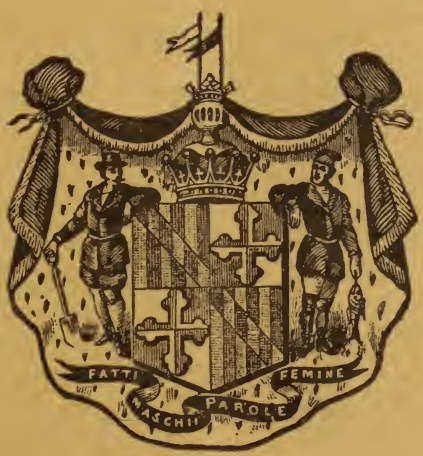

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7. Describe the muscular mechanism of digestion.

8. State what you know of the sources and distribution of the heat of the body.

9. Define secretion, excretion, absorption, nutrition, and state difference between external and internal secretion and give examples.

10. Give a general classification of foodstuffs and give examples of each.

MATERIA MEDICA.

1. Discuss briefly the vaccine and serum theories. Give examples with mode of administration and state for what conditions used.

2. Boric, tannic, dilute hydrochloric, nitric and salicylic acids: Describe and give doses, using official term.

3. Nitrate of silver, arsenic, male fern, asperin: Give official preparation and doses.

4. Define physiological effect, toxicology, incompatibility, idiosyncrasy and cumulative effect.

5. Cannabis indica and aconite—the part of the plant used—preparations and doses.

6. Give the average adult dose of extract of opium, brown mixture, fluid extract colchicum, tincture digitalis, potassium iodide, tincture nux-vomica, fluid extract ergot, syrup iodide of iron, Fowler's solution of arsenic and Donovan's solution. Give preparation and doses, using official terms.

7. Cocaine, codeine and creosote: The official preparations and doses.

8. Write a prescription, for 36 pills, of iron, arsenic, strychnine, quinine and gentian, to be given at each meal, for an adult.

9. Ether, tartar emetic and antipyrin: The official preparations and doses.

10. Describe and give doses of acetanilid, amyl nitrite, and caffein.

THERAPEUTICS.

1. Write a prescription in Latin, without abbreviation, containing a heart sedative and diaphoretic, stating the condition for which it is to be used, with direction for administration.

2. Give the therapy of beladonna, symptoms of poisoning and treatment.

3. Give indications for, and restrictions in, use of chloride of sodium.

4. Give the therapy of quinia, dose and period of administration for special conditions.

5. Give the therapeutic uses of the hypophysis or pituitary body.

6. Give the therapy of ipecac, name and special use of its active principle.

7. Give the name and special use of the active principle of the suprarenal glands.

8. Give the therapy of strychnia, symptoms of poisoning and treatment.

9. Differentiate the therapy of aconite and veratrum viride.

10. Give the physiological action and therapy of bromides.

ANATOMY.

1. Describe the gall-bladder and the biliary ducts.

2. Define synarthrodial, amphiarthrodial, diarthrodial joints, and give three examples of the latter.

3. Give the origin and distribution of great sciatic nerve.

4. Name structures contained in cross-section of thigh on a level with the beginning of Hunter's canal.

5. Give attachments, action and nerve supply of these muscles: Digastric, peroneus longus, biceps femoris, superior oblique (oculi) and pronator radii teres.

6. Name varieties of cartilage and state where each variety is found.

7. Give brief description of the lymphatic system.

8. General description of thymus body.

9. Practical examination.

10. Practical examination.

CHEMISTRY.

1. (a) State the atomic theory of matter. (b) What are ions?

2. (a) What is meant by valence? (b) Give the valence of the following elements: C, P, O, Mg, I, Cl, Hg, S, H, Br.

3. Define and give example of (a) a metal. (b) a base.

4. Write a formula illustrating the reaction between manganese dioxide and sulphuric acid.

5. What is the most important constituent of Paris green and of Rough-on-rats?

6. Define an alkaloid and name three (3) commonly used in medicine.

7. Of two samples of drinking water, one contains nitrates, with traces of free chlorine; the other contains nitrites and free chlorine; which is the safer for drinking purposes? Why?

8. (a) What is the significance of lactic acid in stomach contents. (b) Describe a method of detecting the presence of lactic acid.

9. Describe in detail a method of examining urine for bile.

10. Discuss proteids.

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1	College of Physicians and Surg., Balto., '13.	81	75	94	77	75	98	75	94	75	744	83
2	Johns Hopkins University, '11	80	79	91	92	75	89	75	87	54	722	80
3	Johns Hopkins, '12	69	75	88	89	75	80	69	71	75	691	77
4	University of Maryland, '14	87	80	95	90	86	94	86	98	94	810	90
5	Long Island College, '11	81	75	81	81	87	75	81	84	84	729	81
6	Temple University, Philadelphia, '13	55	69	70	78	79	56	60	75	62	604	67
7	University of Maryland, '14	67	83	84	92	90	75	77	95	80	743	82
8	University of Maryland, '14	72	85	77	79	79	79	64	90	77	702	78
9	University of Maryland, '14	87	81	97	89	87	95	91	100	92	819	91
10	Maryland Medical College, '12	..	..	..	70	79	..	..	61	65	...	..
11	University of Maryland, '13	69	82	82	88	86	64	67	72	67	677	75
12	North Carolina Medical, '14	80	75	73	89	80	63	83	79	58	680	76
13	Johns Hopkins, '13	75	82	..	..	..	79	..	75	..	...	..
14	University of Maryland, '14	87	88	88	88	81	89	75	88	82	776	86
15	University of Maryland, '14	89	84	88	92	85	83	81	83	90	775	86
16	University of Maryland, '14	92	96	95	93	92	91	80	95	95	829	92
17	Johns Hopkins	86	..	..	..	..	76	86	..	94	...	..
18	Johns Hopkins, '14	88	85	75	85	85	98	92	90	78	776	86
19	Johns Hopkins, '14	71	87	98	90	80	90	75	88	85	764	85
20	University of Maryland, '14	90	85	99	84	82	89	66	96	83	774	86
21	University of Maryland, '14	83	85	92	88	93	86	90	94	84	795	88
22	Maryland Medical College, '13	66	79	51	68	82	..	86	..	64	...	..
23	University of Maryland, '14	80	92	92	95	87	82	87	80	90	785	87
24	University of Maryland, '14	92	91	96	91	84	100	92	86	95	827	92
25	Medical-Chirurgical College, Phila., '13	75	87	91	70	91	98	79	80	85	756	84
26	Maryland Medical College, '13	57	82	73	73	65	58	62	56	59	585	65
27	University of Maryland, '14	82	79	87	79	79	88	92	75	82	743	82
28	College of Physicians and Surg., Balto., '13.	73	83	75	78	83	78	76	73	79	698	77
29	University of Maryland, '14	90	80	81	77	78	100	91	87	92	776	86
30	University of Maryland	55	..	..	..	..	65	81	..	71	...	..
31	George Washington University	60	..	..	..	..	94	70	..	86	...	..
32	Johns Hopkins, '14	86	91	99	90	92	100	84	96	98	836	93
33	College of Physicians and Surg., Balto., '14.	82	82	70	92	76	89	84	83	81	739	82
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36	Johns Hopkins, '14	75	92	90	91	82	90	83	88	76	767	85
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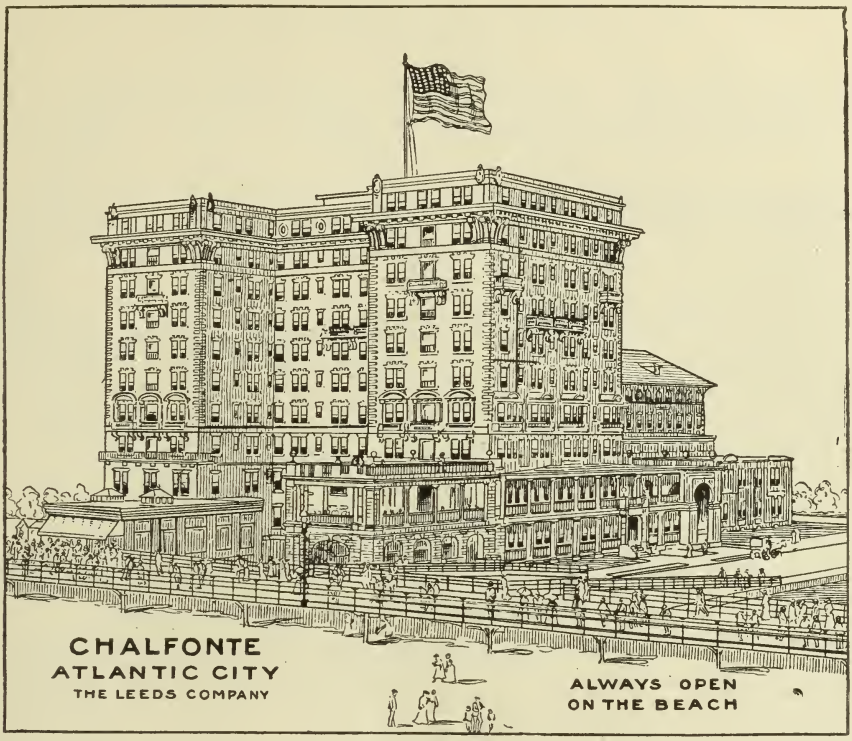
38	Johns Hopkins	92	..	..	..	..	87	85	..	78	...	..
39	University of Maryland, '12	75	..	..	..	..	75	75	85	..	...	..
40	Johns Hopkins, '14	85	85	86	89	84	91	87	87	98	792	88
41	University of Maryland, '14	87	89	90	88	85	84	86	96	81	786	87
42	University of Maryland, '14	84	84	90	91	87	75	75	73	96	755	84
43	Johns Hopkins, '14	69	88	84	75	80	95	53	72	75	691	77
44	Johns Hopkins, '14	94	90	97	92	87	90	83	98	98	829	92
45	University of Maryland, '14	73	92	82	91	77	50	53	71	66	655	73
46	University of Maryland, '14	84	93	85	90	93	82	90	96	95	808	90
47	University of Maryland, '14	68	91	75	75	79	80	87	79	86	720	80
48	University of Maryland, '14	79	89	90	89	83	89	88	82	91	780	87
49	University of Maryland, '14	85	80	85	79	80	81	76	84	75	725	80
50	University of Toronto, '11	79	80	92	90	82	81	84	90	89	767	85
51	University of Maryland	90	..	..	..	..	89	82	..	81	...	..
52	Baltimore Medical, '13	63	..	..	..	82	69	81	..	65	...	..
53	University of Maryland, '14	80	90	88	75	91	80	87	70	82	743	82
54	University of Maryland	83	..	..	..	..	84	90	..	75	...	..
55	University of Maryland	83	..	..	..	..	85	90	..	82	...	..
56	Johns Hopkins	82	..	..	..	..	75	76	..	77	...	..
57	Johns Hopkins	81	..	..	..	..	98	93	..	99	...	..
58	Johns Hopkins, '14	94	94	99	95	90	92	85	81	93	823	91
59	Johns Hopkins, '14	83	92	92	79	94	98	82	81	86	787	87
60	Johns Hopkins, '14	87	90	86	80	88	98	93	87	90	799	89



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62	Johns Hopkins, '14	87	88	99	93	84	94	86	93	84	808	89
63	Johns Hopkins	83	..	..	..	..	97	83	..	95	...	..
64	Johns Hopkins	86	..	..	..	..	89	88	..	87	...	..
65	College of Physicians and Surg., Balto.	71	..	..	..	..	78	79	..	40	...	..
66	Johns Hopkins, '14	75	89	94	91	89	85	75	85	81	764	85
67	University of Maryland, '14	73	85	83	83	81	80	75	70	84	714	79
68	Johns Hopkins, '14	92	88	98	94	84	91	76	91	75	789	88
69	Johns Hopkins, '14	81	91	87	82	83	92	85	75	84	760	84
70	University of Maryland, '14	74	88	90	86	90	72	84	91	86	761	85
71	University of Maryland, '14	62	88	81	75	84	75	63	70	64	662	73
72	University of Maryland, '14	71	90	74	76	81	79	80	71	88	710	78
73	Johns Hopkins	78	..	..	..	..	89	83	..	81	...	..
74	University of Maryland, '14	87	93	99	88	95	87	86	89	95	819	91
75	College of Physicians and Surg., Balto., '14.	58	90	64	78	84	72	61	65	65	637	71
76	University of Maryland	80	..	..	..	..	93	95	..	76	...	..
77	College of Physicians and Surg., Balto., '14.	79	86	57	79	75	79	48	71	69	643	71
78	University of Maryland	85	..	..	..	..	85	88	..	81	...	..
79	University of Maryland, '14	Failed to appear.										
80	University of Maryland, '14	74	92	85	84	84	83	91	96	77	766	85
81	Johns Hopkins, '14	90	91	88	86	80	89	68	81	70	743	82
82	Howard University, '14	74	90	81	82	85	69	75	84	79	719	80
83	Maryland Medical, '13	15	86	71	75	68	30	63	71	19	498	55
84	Meharry Medical, '12	38	70	43	68	67	60	..	52	47	...	..
85	Johns Hopkins, '14	92	91	98	86	90	98	83	70	86	794	88
86	Johns Hopkins	77	..	..	..	..	90	92	..	85	...	..
87	Johns Hopkins, '14	88	92	82	70	85	82	80	95	84	758	84
88	College of Physicians and Surg., Balto., '14.	59	83	69	81	77	75	83	90	82	699	78
89	Johns Hopkins	79	..	..	..	..	79	77	..	72	...	..
90	University of Maryland, '14	74	89	82	93	87	75	79	91	66	726	81
91	Johns Hopkins, '14	81	88	84	91	88	88	75	82	59	736	82
92	University of Maryland, '14	87	88	84	82	83	78	67	75	76	720	80
93	Baltimore Medical, '13	58	..	58	75	..	..	68	70	..	...	..
94	College of Physicians and Surg., Balto., '14.	69	85	66	80	82	85	66	68	77	678	75
95	University of Maryland, '14	75	88	92	93	77	82	70	79	75	731	81
96	University of Maryland, '12	68	..	88	66	83	66	..	70	..	...	..
97	University of Maryland	96	..	..	..	..	100	93	..	91	...	..
98	Maryland Medical, '13	..	75	41	..	82	75	58	..	..	...	..
99	University of Maryland, '14	72	91	79	91	87	75	85	89	72	741	82
100	Maryland Medical, '12	52	72	63	..	..	..	..	..	..	...	..
101	National Medical College, Mexico, '00	84	83	64	67	53	78	65	88	63	645	72
102	Maryland Medical, '10	35	75	50	69	65	..	58	..	30	...	..
103	University of Maryland	Failed to appear.										
104	Johns Hopkins, '14	81	93	98	93	94	76	70	90	93	788	87
105	Maryland Medical, '12	Failed to appear.										
106	University of Maryland	79	..	..	..	..	75	82	..	84	...	..
107	College of Physicians and Surg., Balto., '14.	64	82	80	89	75	75	78	90	70	703	78
108	University of Louisville, '12	52	83	80	65	65	43	65	76	40	569	63
109	North Carolina Medical, '14	Failed to appear.										
110	College of Physicians and Surg., Balto., '14.	84	87	71	89	75	84	61	80	82	713	79
111	University of Maryland	91	..	..	..	..	59	83	..	87	...	..
112	University of Maryland, '14	90	90	88	81	75	85	78	87	83	757	84
113	College of Physicians and Surg., Balto., '13.	75	..	..	..	75	85	77	75	75	...	..
114	University of Maryland, '14	55	80	65	70	63	50	82	77	42	584	65
115	Maryland Medical, '12	33	59	37	55	46	..	50	50	42	...	..
116	University of Maryland, '14	63	75	64	69	75	56	86	76	69	633	70
117	Col. of Phys. and Surg., Columbia, N. Y., '14.	78	90	90	90	83	70	87	93	93	774	86
118	College of Physicians and Surg., Boston, '11.	58	75	53	75	68	65	75	65	66	600	67

In the above summary an average of 75 is required of those participating in the examination for the first time in order to secure a license. Those who have failed are eligible to re-examination at the expiration of six months. They are then obliged to receive a rating of 75 in each branch in which they are re-examined before license can be issued. Under the Maryland laws, students who, at the end of their second year, have successfully passed their college examination in Anatomy, Chemistry, Materia Medica and Physiology, are entitled to examination by the Board of Medical Examiners in these branches. The ratings made by these students in the examination known as the "second-year examination" are carried forward and made part of the final examination, when an average of 75 must be obtained to secure a license. We trust that this statement will make clear the apparently incomplete examination of certain participants.

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Medical Items.

The engagement is announced of Walter D. Wise, M.D., Physicians and Surgeons, class of 1906, to Miss Agnes Gordon Whiting, both of Baltimore, Md. The wedding will take place early in the fall. Dr. Wise is associate professor of surgery, College of Physicians and Surgeons.

The cornerstone of the John Hubner Psychiatric Hospital, which Maryland is erecting for the care and treatment of acute cases of insanity, was laid June 25. Dr. William A. White, superintendent of the Government Hospital for the Insane at Washington, delivered the address, entitled "The New Ideal." Dr. J. Clement Clark, Sykesville, the superintendent, presided at the exercises.

Dr. Ira Remsen left Baltimore July 16 for a tour around the world by way of the west. He attended the meeting of the British Association for the Advancement of Science in August, and will attend various scientific meetings to be held in New Zealand early in September.

Dr. Frank Martin, 1000 Cathedral street, who, with a number of other Americans was marooned in London, was fortunate enough to obtain passage on the steamship Celtic, which sailed from Liverpool August 6. He arrived in New York August 18, after a most exciting voyage. Dr. Martin attended the Clinical Congress of Surgeons in London from July 23 to August 3. Among other Baltimore physicians who attended the congress was Dr. Randolph Winslow of 1900 Mt. Royal Terrace.

Dr. William S. Thayer of the Johns Hopkins Medical School, who underwent a slight operation on his nose, recently, has recovered.

Drs. A. M. Shipley and R. P. Bay represented the University of Maryland in the first aid preparations for the Banner Centennial Week. They located first-aid stations throughout various portions of the city.

BIRTHS.

To Dr. Flavel B. Tiffany and Mrs. Tiffany of 100 Garfield avenue, Kansas City, Mo., August 10, 1914, a son—Flavel B. Tiffany III.

MARRIAGES.

Francis P. Carroll, M.D., Johns Hopkins Medical School, formerly of Hartford, Conn., now of Baltimore, to Miss Mary Cassidy of 129 Jackson Place, at Baltimore, recently. Dr. Carroll is at present associated with Dr. Bloodgood at St. Agnes' Hospital.

Leonard George Rowntree, M.D., to Miss Katherine Marie Campbell, both of Baltimore, Md., at Baltimore, July 9, 1914. Dr. Rowntree is associate professor experimental therapy at the Johns Hopkins Medical School.

Edward N. Brush, M.D., of Towson, Md., to Miss Marie Tregoe Hartman of Forest Park, Md., at Forest Park, August 6, 1914. Dr. Brush is professor of psychiatry at the College of Physicians and Surgeons. On their return from a wedding tour Dr. and Mrs. Brush will reside at the home of Dr. Brush on the hospital grounds.

E. H. McDede, M.D., Physicians and Surgeons, 1910, to Miss Rose Russell, both of Lyndhurst, N. J., at Lyndhurst, August 9, 1914. Miss Russell is a graduate of the training school for nurses of Mercy Hospital, class of 1911. They will reside in Lyndhurst, N. J.

DEATHS.

William Edward Magruder, M.D., University of Maryland Medical School, 1854, a member of the Medical and Chirurgical Faculty of Maryland, died at his home in Sandy Spring, Md., July 13, 1914, from cerebral hemorrhage, aged 80 years.

James C. Rippard, M.D., College of Physicians and Surgeons, 1881, a member of the Medical Association of Georgia, died at his home in Waycross, Ga., July 4, 1914, from heart disease, aged 56 years.

David L. Talkington, M.D., College of Physicians and Surgeons, 1907, died at his home in Jacksonburg, W. Va., May 22, 1914, from the effects of poison accidentally self-administered, aged 37 years.

George Irvin Barwick, M.D., University of Maryland Medical School, 1894, a member of the Medical and Chirurgical Faculty of Maryland; for many years a practitioner of Kennedyville, Md., but for the last four years a resident of Baltimore, died at his home in that city July 25, 1914, from angina pectoris, aged 45 years.

Walton Bolgiano, M.D., of 2327 N. Charles street, Baltimore, died at his home August 2, 1914, aged 40 years. Besides being a member of the Medical and Chirurgical Faculty, Dr. Bolgiano was a member of the American Medical Association.

NOTARY PUBLIC

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Abstracts.

DECANNULATION AND EXTUBATION AFTER TRACHEOTOMY AND INTUBATION RESPECTIVELY.

Dr. Chevalier Jackson, Pittsburgh.

Paper read at the Thirty-fifth Annual Congress of American Laryngological Association, held May 5, 6 and 7, 1913, in Washington, D. C.

The different forms of laryngeal stenosis associated with difficult decannulation or extubation may be classified into the following types: 1. Pain. Breathing through the neck with a properly placed tracheotomy cannula is much easier than breathing through the mouth, that once the patient becomes accustomed to it for quite a while he does not feel that he is getting enough air through the mouth, even though the larynx is perfectly patulous. In addition to this, there is a nervous cell habit arising from previous experience with the stenosis that terrorizes the patient the moment he feels the slightest dyspnea. 2. Spasmodic. This form of stenosis may be associated with panic, or may be excited by subglottic inflammation. It is usually overcome by the same means as those suggested for panic, together with the treatment of inflammatory conditions that may be present. Doubtless one of the chief causes of adductor spasm is the prolonged wearing of the intubation tube. 3. Paralysis. Bilateral ankylosis of the cricoarytenoid joints may prevent decannulation until the laryngeal stenosis is relieved. This operation is not to be advised except in such cases as have remained rigid for a period of twelve months or more, and this is not meant to include the fixation that is associated with malignant, tuberculous or luetic infiltrations. 5. Neoplasms. Decannulation in neoplastic cases will depend upon the nature of the growth and its curability. 6. Hyperplastic. 7. Cicatrical, (a) loss of cartilage; (b) loss of muscular tissue; (c) fibrous. The hyperplastic and cicatrical types of organic stenosis preventing decannulation may be classified as follows: 1. Tuberculosis. 2. Lues. 3. Scleroma. 4. Acute infectious diseases, (a) diphtheria; (b) typhoid fever; (c) scarlatina; (d) measles; (e) whooping cough. 5. Decubitus, (a) cannular; (b) tubal. 6. Trauma, (a) tracheotomic; (b) intubational; (c) operative; (d) suicidal. Conditions outside of the paralytic and neoplastic forms are almost all the result of inflammation, often with ulceration and the secondary tissue changes. In the infective granulomata it is practically always the mixed infections from oral sepsis running that do the harm. The chief exception to this is diphtheria, which is in many cases a distinctly necrotic process. In the rare cases in which laryngeal tuberculosis of such severe type as to require tracheotomy is cured, decannulation presents little difficulty after the infiltrations are reduced. The reduction of these infiltrations by the galvanocautery through the laryngeal speculum is readily accomplished. Should cicatricial stenosis from ulceration remain, it is to be treated in the same way as cicatrices from other caues—by laryngostomy. In those old cases of luetic fibrosis little amenable to the older methods of treatment, salvarsan has accomplished wonders. Dr. Emil Mayer has recommended the use of radiotherapy in the treatment of scleroma. So far, however, the results have been so unsatisfactory that they practically constitute the only cases in which decannulation is

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impossible. When typhoid fever was prevalent in Pittsburgh, it was found that the ulcerative lesion in the larynx was practically always the result of mixed infection, but in some instances they were due to thrombosis of a small vessel with subsequent necrosis. The after-treatment of these cases is chiefly by prolonged intubation, and in some cases by laryngostomy. Scarlatina may be followed by acute laryngeal stenosis which is cicatricial. Occasionally foreign bodies may ulcerate through from the esophagus into the trachea. A properly fitting tube will not cause any ulceration, if it is free from roughness or sharp edges, and is removed sufficiently often to be cleaned. For diphtheria and like conditions I have never seen any improvement on the original O'Dwyer apparatus. When a tracheotomized case reaches the stage when it is to be trained to breathe through the mouth, it is necessary to occlude the cannula. For the reduction of exuberant granulations, nothing has yielded better results than resorcin. As a stimulation to epitheliazation the German preparation, "scarlet red" (Biebrich), in a sterile 20 per cent. mixture has yielded excellent results during laryngostomy. One of the most common causes is the neglect of frequent changes of dressings.

REPORT OF A CASE OF PHLEGMON STARTING AS A PERITONSILLAR ABSCESS AND EXTENDING DOWNWARD AS FAR AS THE SECOND RING OF THE TRACHEA.

Dr. George I. Richards, Fall River.

Paper read at the Thirty-fifth Annual Congress of American Laryngological Association, held May 5, 6 and 7, 1913, in Washington, D. C.

This case had its origin primarily in a peritonsillar abscess, and secondarily in a diseased tonsil, and in a good example of a severe phlegmon.

RESULTS OF RADIUM IN CANCER.

H. H. Janeway, New York (*Journal A. M. A.*, May 30, 1914), reviews the results of treatment of cancer by radium, noting the work of Wickham of Paris, which seems to indicate that while the influence of radium on all types of cancer is a favorable one, it does not extend to the limits of the disease in any but the most superficial forms. Wickham's works cover 1000 cancer cases thus treated. The work of the Radium Institute of London covers 460 cases of cancer during 1912, none of which are reported as cures, though some of them may later prove to be such. Out of 101 cases of slow growing benign forms of skin cancer, 31 patients were apparently cured for the time and 41 improved. But in cancer of the rest of the body there were only 15 apparently cured. The results also confirm the observations of Wickham. The less extensive test of radium in cancer at Vienna lead to the same general conclusions. While Wickham's reports show some enthusiasm, the German reports are very conservative and the London Radium Institute is non-committal. All, however, show a remarkable agreement as regards results. While radium will destroy cancer tissue in a dosage not affecting normal tisues, it does not cure the disease unless the cancer is quite superficial or of a very susceptible type. We may cherish a hope that greater success may be had in the future, but at present radium can only supplement the knife.

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dimnish the destructive processes going on. Moreover, it is found in these cases that the improvement is often permanent, with little or no tendency for the blood to revert to its previous condition.

Transfusion of human blood, unfortunately, is a very difficult and inconvenient form of medical procedure, but the beneficial qualities of normal blood serum may still be obtained by means of administering Bovinine, containing unheated beef-blood serum, by mouth.

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Placing the Blame.

At the present day much discussion is being heard on every side concerning the rôle of the intestinal canal in the causation and development of innumerable diseases. Once the liver was the chief malefactor, and a disordered liver, if not blamed as the chief cause of pretty nearly every disease that "human flesh is heir to," was sure to be considered *particeps criminis*. As the indictment of the liver has been narrowed and its culpability brought within more specific limits, some other culprit has become necessary. How natural to turn to the liver's closest associate and known accomplice, the intestinal tract? Thus it is that the "human cesspool," as Sir William Arbuthnot Lane has styled the intestinal canal, has had to stand accused of the etiologic crimes that the liver is no longer held accountable for.

But, as always happens, interest in the depravity of the new culprit has made the actual misdeeds of the old lose much of their importance. And so gradually, but none the less surely, we have grown to ignore the crimes of the liver until at last, in our indignation at and fear of the intestines, we are almost ready to look upon the liver as "more sinned against than sinning"—a victim of hasty and unwarrantable accusation.

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With this state of affairs it is not surprising that the liver, wily and dangerous old offender that it is, has been allowed to perpetrate many outrages without being called to account. It is high time that medical men awake to the fact that the liver is the same old trouble-maker it has always been, and needs watching as closely as ever.

Indeed, recent study of intestinal stasis and associated conditions has shown that the liver is often the main culprit even in this affection. The action of the bile in controlling intestinal putrefaction, arresting bacterial activity, promoting peristalsis and assisting digestion make it highly necessary that this important secretion be frequently interrogated as to its quantity and any decrease in the bile output given instant and vigorous attention.

This naturally raises the question, What is the best and most effective cholagogue? Many and various hepatic stimulants have been brought forward, but experience has shown that for promoting the functional activity of the liver nothing is superior to Chionia. This is an exceedingly effective preparation of chionanthus virginica. Administered in proper dosage it is a powerful hepatic stimulant, increasing the flow of bile, without, however, producing the marked and extreme catharsis which makes so many other hepatic remedies highly objectionable.

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THERE is a growing impression among specialists in those diseases that catarrhs of the nose and ear, especially chronic discharges, are commonly the results of mixed infections. If this view is correct, is it not a fair inference that Mixed Infection Phylacogen may provide a solution to one of the most perplexing problems that the profession has been called upon to solve? There is ground for such conclusion. Certain it is that the Phylacogen referred to has produced some very satisfactory results in numerous cases which had failed to respond to conventional modes of treatment. The writer recalls several cases of this character that have been reported in the medical press during the last year and a half.

An open letter to the profession, which is appearing in leading medical journals over the signature of Parke, Davis & Co., adduces additional evidence of the value of Mixed Infection Phylacogen in stubborn nasal and aural infections. This communication, which bears the title "A Letter to Medical Men," cites some cases that appear strongly confirmatory of the mixed-infection theory of etiology. All of the reports are interesting. At least one of them is remarkable; it deals with a housemaid who suffered almost total deafness in one ear for 21 years, and whose hearing in the defective organ was practically restored after 11 injections of Mixed Infection Phylacogen.

Common Sense in Managing Digestive Disorders.

THE artificial digestives have their place in modern therapy, but their use should always be tempered with sound judgment. Otherwise conditions we seek to correct are very apt to be aggravated. Undoubtedly we have placed too much reliance on the digestants, and as a consequence have often done more harm than good. As one physician states in referring to the digestive function: "Nature should be gently assisted in the human economy. If we persist in doing its work, like the lazy man, it soon depends on that assistance. This is true to the action of the liver, stomach, intestines, as well as all functions of the human anatomy. How often do we meet with individuals who are habitually dosing themselves whenever an action of the liver or bowels is required, and others who require a dose of pepsin or one of the many artificial digestives after each meal. This is all wrong. The functional activity of the entire process of digestion should be encouraged, and any remedy that will specifically stimulate these functions to their healthy action is of greater service in digestion than pepsin. Seng, a remedy that has a well-defined secernent action on the glands and mucous membranes of the stomach and intestines, thus compelling the secretion of nature's own digestive fluids, is the modern treatment for dyspepsia."

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Abstracts.

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Dr. George A. Leland, Boston.

Paper read at the Thirty-fifth Annual Congress of American Laryngological Association, held May 5, 6 and 7, 1913, in Washington, D. C.

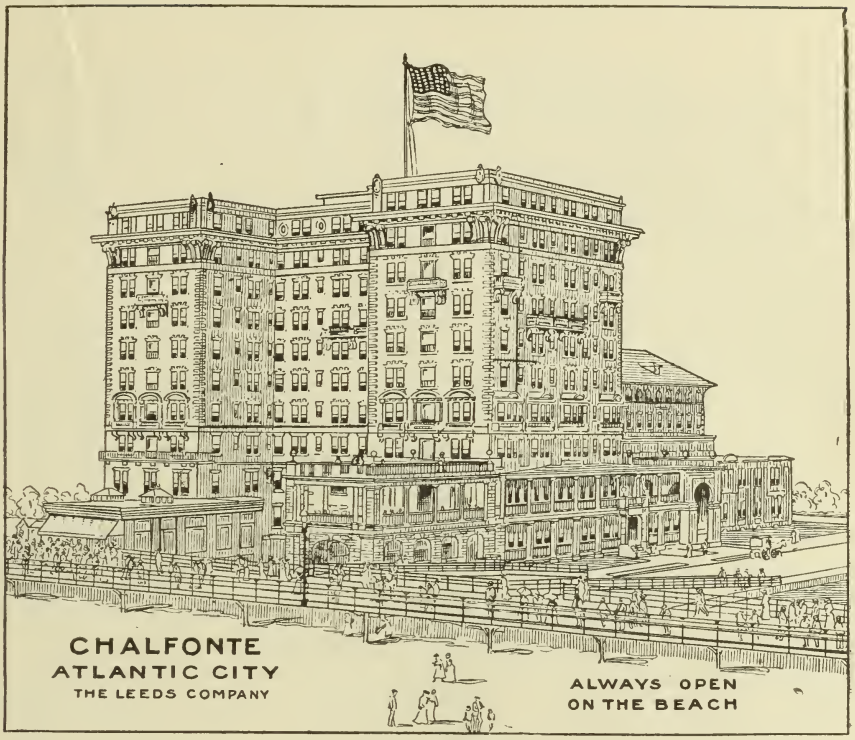
Our founders builded wiser than they knew when they chose the throat as a field for their specialty; for here, as shown by modern bacteriology and clinical observation, is the port of entry of many of the diseases to which poor human flesh is heir. It is well established that through the nose and throat may enter the micro-organisms which cause tuberculosis, nephritis, endocarditis, sepsis, cerebrospinal meningitis, acne, erythema nodosum, erysipelas, etc., and by extension up through the Eustachian tube, aural diseases of all sorts leading to deafness, pyema, meningitis, intracranial abscess, etc. It is the province of preventive medicine to obviate all this and to put the upper air passages into the best possible shape. If the nose and throat can be put in proper shape and continuously used, the occupation of the aurist will be gone except for the effects of traumatism, and perhaps for the infections.

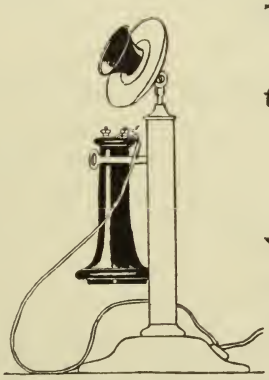
SYMPOSIUM ON PHLEGMONS OF THE UPPER RESPIRATORY TRACT—REPORT OF A CASE.

Dr. F. E. Hopkins, Springfield.

Paper read at the Thirty-fifth Annual Congress of American Laryngological Association, held May 5, 6 and 7, 1913, in Washington, D. C.

This case illustrates the possibility of erosion of a large blood vessel. The patient was a male, 26 years of age, of poor resistance because of leading an irregular life and having had a recent acute illness. He had suffered from measles, and while convalescing took cold. There was marked swelling on the left side, with severe pain, but the patient was not prostrated, and at no time did his temperature go above 101° F., or his pulse above 80 or 90. Deep incisions were made, but these yielded no pus, and there was no evidence of pointing. Two days later a hemorrhage occurred, which was controlled by pressure. On the following day a terrific hemorrhage occurred, and quickly proved fatal. Such an examination as could be made immediately following death showed rupture through the posterior pillar, the flood from the eroded carotid finding exit there. Such a mass of cellular infiltration should be explored with a blunt instrument, even the finger, following unfruitful incision. The wonder is not that phlegmons threatening life occasionally develop, but rather, considering the frequency with which infections of this region occur, that they are so rare that an active professional life may pass and not a single one come under observation. Microscopic findings are of little value in determining the treatment of these cases. Early and effective drainage is the best assurance of a favorable prognosis. Suffocation from flooding of the larynx by the sudden rupture of an abscess has been reported, and tracheotomy has been required because of closure of the pharynx by infiltration and edema, but the complication I wish to emphasize is that of erosion of blood vessels by the necrotic process.





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FOREIGN BODIES IN THE ESOPHAGUS, WITH REPORT OF TWO CASES.

Dr. Cornelius G. Coakley, New York.

Paper read at the Thirty-fifth Annual Congress of American Laryngological Association, held May 5, 6 and 7, 1913, in Washington, D. C.

The first patient, a boy of 16 years of age, thought he had swallowed a piece of plate in his soup. He had a temperature of 105°, rapid pulse and pneumonic area in the right lung when first seen. Examination of the pharynx showed edema extending from the vault of the nasopharynx as far down as one could see with the laryngeal mirror, or feel with the fingers. It much resembled a retropharyngeal abscess. The X-ray showed a triangular-shaped foreign body. It was jagged, and evidently had cut into the mucous membrane so as rapidly to infect the pharyngeal mucosa, and the secretion from the infected pharynx passing into the larynx, setting up a septic pneumonia within 24 hours. The boy died 14 hours after the operation from acute septic pneumonia. This case shows the necessity for the prompt operative relief for removal of sharp foreign bodies. The same day I saw a boy three years of age who had swallowed a coin. The X-ray showed the coin at the level of the sixth cervical vertebra. The child had no symptoms. The coin was removed by operation, and the child suffered no subsequent discomfort. In this instance the coin had been in position for five days before it was removed.

INFLAMMATION OF THE LATERAL COLUMNS OF THE PHARYNX LEADING TO ABSCESS FORMATION, WITH REPORT OF CASES.

Dr. Henry L. Swain, New Haven.

Paper read at the Thirty-fifth Annual Congress of American Laryngological Association, held May 5, 6 and 7, 1913, in Washington, D. C.

Any isolated mass of lymphoid tissue can in a general way be expected to act when inflamed exactly after the fashion of the faucial tonsil, and can have, like the latter, simple, acute, follicular, rheumatic, diphtheritic and phlegmonous inflammations. The adenoid or pharyngeal tonsil may have acute as well as chronic inflammation. The same is true of the lingual tonsil. If we continue to remove root and branch from young children all of their adenoids and faucial tonsils, there will be abundant need to devote more and more attention to these masses of lymphoid tissue, as well as to the lingual tonsil. In years gone by, when adenoids were removed from children and the faucial tonsils were left untouched, the latter subsequently enlarged into a perfectly healthy growth, as though needed by the system. If the faucials are thus ruthlessly removed, there will be enlargement of the lingual tonsil or lateral columns of the pharynx, as there has been of the faucials following the older simple adenoid operation. If this is logically true, we will find not only acute inflammations of these structures, but also phlegmons. We have assumed more or less arbitrarily that as the lateral column of the pharynx is no mean mass of lymphoid tissue, and as it has been known to have all other kinds of inflammation to which lymphoid tissue is heir, we have a logical right to expect that there may also be the phlegmonous type, and I propose to submit facts concerning certain cases

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confirmatory of this statement. I recently had six cases of edema of the larynx, in two of which there was no quinsy at all. There was inflammation of the lateral column of the cord in both these instances, and there was in one a marked general, what may be called rheumatic, infection, where various joints of the body were affected, with no persistence of the symptoms in any one place for any length of time. In these various cases of edema one has to look to some other cause than pressure.

PHLEGMONS OF THE UPPER RESPIRATORY TRACT.

Dr. John O. Roe, Rochester.

Paper read at the Thirty-fifth Annual Congress of American Laryngological Association, held May 5, 6 and 7, 1913, in Washington, D. C.

The phlegmon is simply another name for inflammation, although clinically it is regarded as an extraordinarily intense inflammation, and looked upon as being of more or less malignant character. We may have an inflammation of this character in any part of the body, the intensity of which may depend upon the virulence of the infection and the resistance or lack of resistance of the patient, or of the tissues, to such infection. Owing to the difficult breathing or choking which such inflammation causes in the upper air passages, it has received the name of angina. Inflammations of a severe grade, termed phlegmons, may involve any portion of the upper respiratory tract. We almost invariably find a phlegmon attacking one whose general condition has become weakened. The treatment of these infections requires no special law unto itself, and must be dealt with according to the location and associated complications.

PRIMARY CARCINOMA OF THE EPIGLOTTIS, WITH REPORT OF A CASE.

Dr. Emil Mayer, New York.

Paper read at the Thirty-fifth Annual Congress of American Laryngological Association, held May 5, 6 and 7, 1913, in Washington, D. C.

Primary cancer of the epiglottis is a rare disease, and up to the present time the treatment has consisted of surgical intervention or the use of radium and the X-ray. I have seen two cases of cancer of the epiglottis. The first case was diagnosed as probable malignant disease of the epiglottis, and the subsequent history was that of primary epithelioma of the larynx with subsequent metastatis, laryngectomy, and death. The second case was that of a man, 64 years of age, who consulted me for some slight difficulty in swallowing, especially the swallowing of cold liquids. His general condition was good.. Examination showed some edema of the uvula, and numerous small white spits on the tongue and inner surface of the cheek. The condition was diagnosed as leukoplakia buccalis. He gave no history of lues. After treatment he improved somewhat, but this did not last, and some six or seven months later there was discomfort in swallowing, a nasopharyngeal catarrh, and the white patches still present. There was no other evidences of a diseased condition in the throat. About three weeks later a new condition presented itself on the laryngeal surface of the epiglottis. There was a deep ulceration surrounded by a thickened mass. The pathologist pronounced this cylindrical celled carcinoma. Here I had a case of carcinoma

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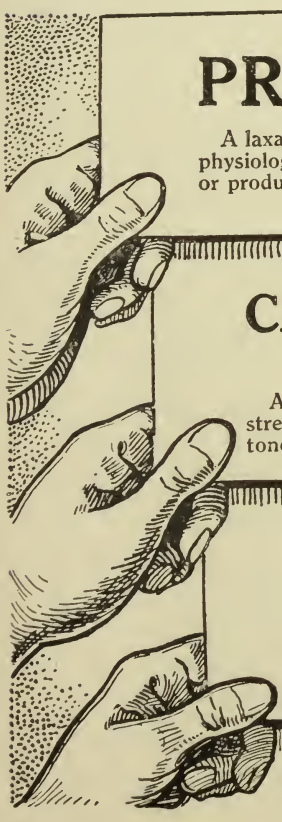

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of the epiglottis in its earliest stages. The epiglottis was removed, after the patient had been anesthetized and the suspension laryngoscope placed in position. There was little bleeding at the time of the operation, but 26 hours after the patient began to expectorate large quantities of blood. This bleeding was checked by the application of ice internally and by sprays of peroxid of hydrogen. He left the hospital in 10 days. This was the first operation of its kind ever performed under the ingenious suspension laryngoscope of Killian.

NITROUS OXID GAS, ESSENCE OF ORANGE, ETHER AND SEQUESTRATION IN GENERAL ANESTHESIA FOR OPERATION IN THE UPRIGHT POSITION.

Dr. Thomas R. French, Brooklyn.

Paper read at the Thirty-fifth Annual Congress of American Laryngological Association, held May 5, 6 and 7, 1913, in Washington, D. C.

We are now able to state that as a result of the movement of the new operating table, and also as a result of the tests made in our clinic at the Long Island Hospital, that operative work in the upright position can be done with still less loss of blood, with the need of still less of the anesthetic, and with less disagreeable conditions during recovery from the anesthetic. Sudden changes in posture or sudden disturbances of the body while patient is under a general anesthetic, predisposes to shock, the effects of which are manifested both during the operation and during the recovery from anesthesia. After a careful study of this phenomenon, I became impressed with the value of elevation of the body from the recumbent position to the upright position without jarring, and this led to the construction of the chair table. By the aid of a new attachment all the movements of the body are now made with as great freedom from jarring and disturbance of balance, with infants and very small children, as had hitherto been possible only with adults or larger children. The resulting improvement in conditions leaves no doubt of the accuracy of the observation. One of the most important and valuable recent additions to methods of anesthesia is the ability to omit or bridge the second stage, or stage of excitement, and we have been impressed with the desirability of attaining parcosis without struggle. This can be accomplished with nitrous oxid gas, but with greater ease and certainty with the essence of orange. The discoverer of the remarkable effects of the essence of orange as a preliminary to ether, Dr. Gwathmey of New York, has demonstrated the possibilities, and has proven to our satisfaction that it greatly assists in the reduction of shock by bridging the stage of excitement. Anesthesia conducted in this way up to the time of raising the body to the upright position is a contributory factor in reducing hemorrhage, and also in reducing the quantity of anesthetic and in shortening and modifying the anesthetic after-effects. Irrespective of all other conditions, there is a well-defined relationship between the degree of skill in which a patient is anesthetized in the upright position and the amount of hemorrhage is reduced if the anesthetic is smoothly given. A preliminary use of nitrous oxid gas or the essence of orange and the drop method of anesthol, followed by the drop method ether with the open inhaler, and

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later with the Allis inhaler, will insure a prolongation of the anesthesia after the body has reached the upright position, a reduction of hemorrhage, and a reduction in disagreeable sequelæ. Sequestration of the limbs produces a congestive hyperemia, and is produced by means of inflated blood pressure cuffs about the thighs and arms; this reduces the amount of blood in the head. This, in association with the upright position which has been carried out in 58 cases during the past season, reduces still further the amount of anesthetic required, and still further the loss of blood. There need be no apprehension of subsequent bleeding.

TRAINING OF THE SPECIALIST.

Dr. Thomas J. Harris. New York.

Paper read at the Thirty-fifth Annual Congress of American Laryngological Association, held May 5, 6 and 7, 1913, in Washington, D. C.

A concentrated advance movement to properly standardize our specialty is essential. The time is now ripe. As an outline for a more definite working basis, some such plan of instruction for special work may consist in the following divisions: First, thorough preparation in the undergraduate medical school; second, a general preliminary training through several years of practice or hospital internship; third, at least six months of special instruction covering not only the clinical side, but the anatomic, pathologic, surgical, etc., as well; fourth, 18 months of internship in a special hospital or in the ear, nose and throat department of a general hospital; fifth, at the conclusion an examination by a university which should confer upon the successful candidate a postgraduate degree. The committee appointed to investigate and report on this subject is strongly of the opinion that the postgraduate instruction should be given in some established university, and, further, that to make this departure a success, legislation will be necessary. The committee is of the opinion that any success in this movement must be the result of concerted action on the part of the several societies representing America and Canada.

HISTORY OF A BRONCHOLITH, BRONCHIAL CALCULUS OR LUNG STONE.

Dr. Walter F. Chappell, New York.

Paper read at the Thirty-fifth Annual Congress of American Laryngological Association, held May 5, 6 and 7, 1913, in Washington, D. C.

This case is cited to show that all causes of asthma are not centered in the nose, nor all throat coughs in the larynx. The patient was a woman, 52 years of age, who was attacked by severe weezing, the spasmodic cough lasting an hour at a time, and by intense tickling in the throat. The tickling was below the larynx, and the wheezing in the upper part of the chest, in front and behind. The patient soon raised a small calcareous mass, but the asthma continued. Another coughing spell resulted in the expulsion of a large calcareous mass. Immediately all wheezing stopped, and the breathing became absolutely free. Later another calcareous mass was coughed up. Chemically these masses consisted of phosphate of lime. The patient gave no history that would give a clue to the cause for the existence of this condition.

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before the Medical Society of Montreal and later published in *L'Union Medicale du Canada*. Dr. Benoit refers at some length to a number of typhoid cases that were treated at the Notre Dame Hospital, concluding his paper with the significant observation that "the treatment of typhoid fever with Phylacogen gives real results." Physicians are advised to send for a copy of this "Typhoid Phylacogen" pamphlet, addressing their requests to Parke, Davis & Co. at their home offices in Detroit, Mich.

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Abstracts.

ABSTRACT OF PAPER READ RECENTLY AT THE MINNEAPOLIS MEETING OF THE AMERICAN MEDICAL ASSOCIATION ON "THE RESULTS OF TONSILLECTOMY UNDER LOCAL ANESTHESIA."

By Bryan DeForest Sheedy, M.D.,
New York.

All of the one hundred cases reported upon by the reader of the paper were examined several months after operation and no patient under fourteen years of age was operated upon under local anesthesia. There was no grouping of the patients examined as to whether the throat conditions were the result of operation under local or general anesthesia. The enucleation of the tonsils had been performed by some one of the many methods in vogue for the last few years for the complete removal of the gland, and as the operations were performed in practically all the public institutions in New York City, many men of prominence in laryngology were the operators, so that the results could not be attributed to poor technique on the part of one man.

The writer arrived at the conclusion that tonsillectomy, so far as removing pathological tonsils is concerned, is a better operation than the old-time tonsillatomy, but pointed out that many of the throat defects following the operation of enucleation are due to clumsy and non-surgical technique.

The writer also pointed out the normal relation of the surrounding parts to the tonsil and put up a strong argument against the use of sharp instruments for the dissection of the tonsil from its bed, that being the cause of injury to the muscles with resulting deformities.

Of the one hundred cases examined months after operation, more than 80 per cent. of the patients had deformed throat. The 20 per cent. of patients with what appeared to be normal throats following the operation were inconvenienced in no way at any time following the operation. Of the 80 patients, 34 complained of speech defects from one to three weeks after operation, 16 complained of speech defects for more than three months after operation, while 4 had practically lost the singing voice. About 25 per cent. of the patients stated that their throats felt better and that they could speak and sing better after operation than before. Inability to use certain words had continued with 5 per cent. of the patients for more than six months after operation.

The variety of deformities following enucleation were classified as follows:

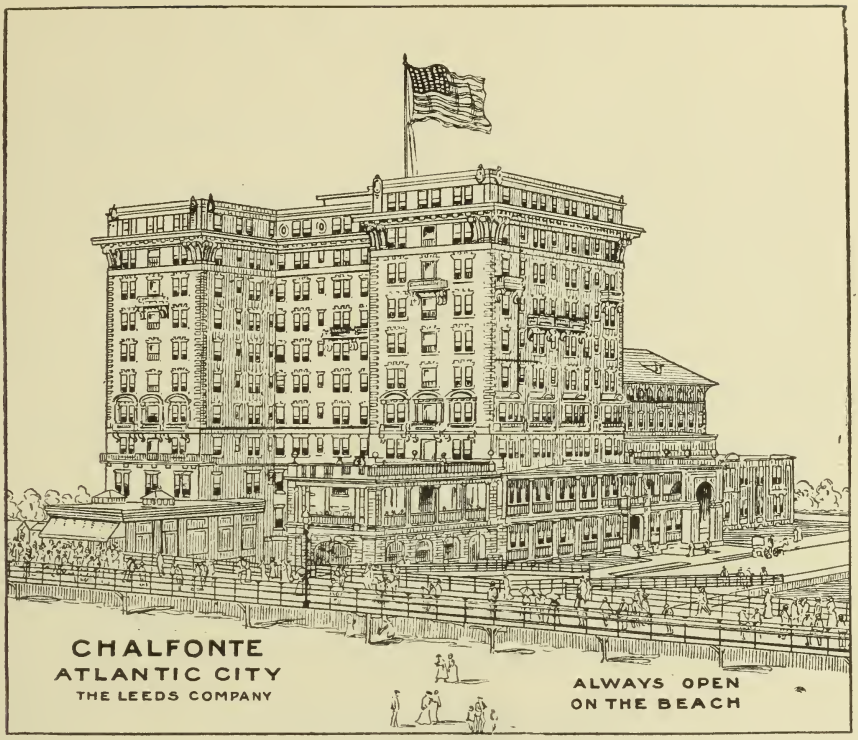
(1) The pillars on both sides had disappeared with the soft palate tightened to such an extent that the opening at the nasopharynx was narrowed.

(2) The pillars on both sides had grown together.

(3) The anterior pillar had wholly disappeared with a large amount of cicatricial tissue deposited on the posterior pillar.

In the four patients whose singing voice had been seriously affected the posterior pillar had disappeared through amalgamation with the anterior or with the lateral wall of the pharynx.

The reader emphasized the fact that he did not think the last word had been said in regard to tonsil enucleation and proposed



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as a remedy for preventing the unsatisfactory throat results an operation for removing the tonsil by what he called the "Eversion Method," and with charts and diagrams pointed out that the capsule of the tonsil is simply a bag, the bottom of which may be pulled through its mouth so that its inner surface becomes the outer, and that if the capsule with its glandular tissue is everted and a snare placed on, removing the tonsil with its capsule complete (there being no dissection and therefore no injury to the muscles surrounding) there would be no deformities.

The exceptions to the rule presented, viz., that the tonsil will evert on traction, were:

(1) Those cases in which the capsule was bound down to the surrounding tissues by previous attacks of inflammation.

(2) Those cases where the capsule was very much contracted and contained cicatricial tissue only.

(3) Those cases of hypertrophied tonsils which had everted themselves and the tonsil was found everted when the patient applied for treatment.

The points advanced in favor of the procedure were:

(1) Simplicity of the operation.

(2) Practically no hemorrhage.

(3) Little or no deformity following the procedure.

(4) Only three instruments necessary for the operation—Tonsil tenaculum, blunt-pointed tonsil knife, Tyding snare.

Editorial Comment.

THE WAR AND MEDICINE.

The Medical Times.

Medical men naturally look to a great trying out in the European war of the medical departments of the armies engaged. The management of wounds and diseases incidental to military campaigns and the results thereof will be studied with the greatest interest. We rather look for unprecedented success, in view of the high character of attainment represented in the medical personnel of the armies of Germany, France and England. This, of course, aside from the terrific mortality to be expected from the inevitable butchery of the titanic contest itself. The Russian Red cross is a splendidly organized force, with vast resources, both financial and institutional. One municipality alone (Moscow) voted it $5,000,000 on August 1. The Austrian and Japanese Red Cross services are strong.

What will be some of the effects of this war on medicine itself and the medical profession? Our therapeutics will undergo certain necessary modifications which may involve more than temporary effects upon practice, because of the cost of some drugs and the withdrawal of others. An impetus should be felt in the manufacturing line as regards surgical and optical instruments, and the home production of certain drugs like digitalis ought to be increased. Post-graduate study in America may be established as a steady habit. One way to develop this trend would be to make it less expensive and more efficient. The times are ripe for this, for we have long been threatening to compete more than successfully with Europe in this field, and would probably have

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forged ahead even if there had been no European war. The medical press of America finds itself called upon to carry on the torch of knowledge, for the European journals, for obvious reasons aside from the scarcity of paper, are printing very thin editions. During and after the war great medical congresses will find in America the most feasible points for meeting. The terrific economic losses of the war will stay medical progress abroad for years to come. The financial resources of science are in process of dissipation. Research will be greatly hampered both for this reason and because of the loss in battle of the flower of Europe's laboratories, now fighting as reservists and volunteers. Military hygiene will take a forward step, but the progress that goes with peace will be stayed. It is possible that surgery will be improved in certain ways, for, as the *Medical Record* points out, it was upon the battlefield that Ambroise Paré demonstrated the superiority of the ligature to the cautery.

Upon the United States devolve now the great tasks and the great opportunities of medical science and art, and we should forge far ahead in the days to come. The ravages of the war will be far offset if we find it possible to lay against them some great achievement. The conquest of cancer would be a greater victory than any that may come to the embattled forces in the cockpit of Europe, so far greater with respect to lives and moral value that the mind is awed by the comparison. Our functions, responsibilities and obligations in the premises are great and sacred.

DRUGS AND THE WAR.

The Medical Times.

The drug trade will suffer perhaps more than any other as a result of the European war. Drugs chiefly affected in price so far are quinine, cod liver oil, hyoscyamus, salvarsan, morphine, opium, aconite, essential oils, ergot, phenol, glycerin, digitalis, buchu, physostigmin, camphor, pilocarpin, senna, rhubarb, cantharides, atropin, homatropin, asafetida, aloes, tartaric acid, strychnin, cocain, novocain and the other local anesthetics, formaldehyd, caffein, theobromin, bichloride of mercury and the synthetic drugs. The United States is a small drug producer, hence is bound to suffer because of the interruption of trade caused by the war. The increased demand abroad for chloroform and ether will affect the prices of these drugs also. The war ought certainly to result in a tremendous stimulation to domestic drug production. A country which is so great a user of drugs ought not to depend to the extent it does upon foreign producers. While it is true that we are absolutely dependent upon Europe for certain drugs, this cannot be affirmed of all that we import. And probably for our absolute dependence in the case of some drugs it would be possible to substitute relative independence. As regards cinchona, why should we not transfer our trade directly to South America, instead of dealing with London and Amsterdam? There is enough digitalis growing wild in Oregon and Washington to supply the world.

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This fraud, which was exposed at an action tried before the Supreme Court of Victoria at Melbourne, and others reported before in the medical literature, show that every physician should see that his patient gets exactly what he prescribed. No "just as good" allowed.

A Much-Needed Innovation.

So many accidents have occurred through mistaking mercury bichloride tablets for those intended for headaches, insomnia, indigestion, etc., that the necessity for some distinctive feature in shape, color or other means be adopted by manufacturers that may effectually remedy the evil. Numerous devices, including shape, color and style of container, have been tried, with only partial success; for, more often than otherwise, the corrosive sublimate tablets have been hurriedly taken at night from the medicine chest or shelf, from containers closely resembling other practically harmless ones with such self-assurances of security, while in order not to disturb others and without light to confirm the identity of the tablet, deplorable accidents have been all too frequent. Under such circumstances, in the hurry of the moment color counts for nothing, while shape of tablet or container alone is practically negligible.

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The Neurasthenic Invalid.

LIKE the poor, the neurasthenic is "always with us," and while the stress and strain of modern life and living continue, the physician will be called upon to treat the more or less chronic invalid who exhibits all sorts of bizzare symptoms in endless and kaleidoscopic variety. It is, of course, an easy matter to advise the physician to search out and remedy the operative cause of the disorder, but it is not always as easy to do this, especially when no organic changes are discoverable. While purely symptomatic treatment may be unscientific, it is usually essential in order to gain and retain the confidence of the patient. There is, however, one pathologic finding in a large majority of cases, and that is anemia of greater or lesser degree. In some instances this may be found to be the essential cause of the neurotic symptoms. In any event, this condition should be corrected, and for such purpose there is no better remedy than Pepto-Mangan (Gude). When a hematinic is indicated for a nervous, cranky man, or a finicky, more or less hysterical woman, Pepto-Mangan is peculiarly serviceable, as the patient cannot consistently object to the taste, which is agreeable to everyone. The digestion is not interfered with in the least, constipation is not induced, and the blood-constructing effect of the remedy is prompt and certain. It is always worthy of trial not only in the anemia of the neurasthenic invalid, but also in all conditions of blood and tissue devitalization.

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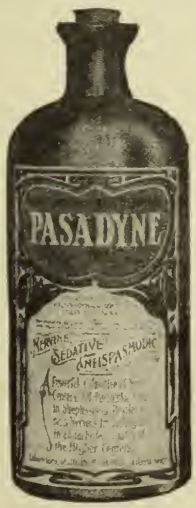

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As is known, perhaps, to most physicians, Corpora Lutea is largely used to control the symptoms following the removal of the ovaries, especially in young women, and to relieve the nervous disturbances attending the natural menopause. Reports have appeared on its successful employment in the treatment of amenorrhea, dysmenorrhea, chlorosis and menorrhagia. It is supplied in desiccated form, in capsules of five grains each, equivalent to about thirty grains of fresh corpus luteum. Only the yellow granular material from fresh ovaries is used in its preparation, the remainder of the gland being discarded because of its lack of therapeutic value.

While comparatively a new product, there is sufficient evidence at hand to warrant the opinion of one writer who expresses the belief that "in Corpora Lutea we have a preparation that will be a blessing to womankind."

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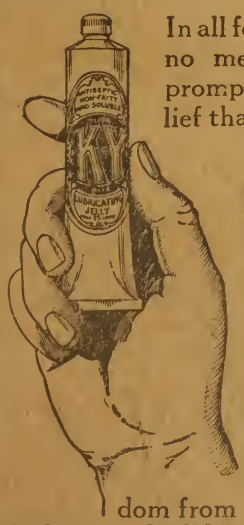

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PRINCIPLES OF CRIMINAL ANTHROPOLOGY.

By Arthur MacDonald, Washington, D. C.,
Honorary President of the Third International Congress of Criminal Anthropology of Europe.

Criminal anthropology is a recent line of research. It includes the study of man mentally, morally and physically, and necessarily depends on the results of many sciences. It is therefore distinctively *synthetic* in character. Criminal anthropology affords more opportunities for persons of ability to carry out the highest ideals than any other branch of inquiry.

The following are some of the principles of criminal anthropology, or what might be called its platform:

1. Degrees of criminality should be estimated according to detriment to the community. From this point of view, international crime, or war, is by far the greatest of all crimes.

2. History is mainly history of the abnormal, especially war, and one of the objects of criminal anthropology is to lessen and prevent war. Montaigne says: "It is more barbarous to kill a live man than to roast and eat a dead one."

3. The greatest of all studies is man, which is based upon the individual, the unit of the social organism.

4. If the study of civilized man is to become a science, it must depend upon investigation of large numbers of individuals, and the method should be the same for all classes, if we are to distinguish between the normal and abnormal.

5. The best method of study for criminal anthropology is that of the laboratory in connection with sociological data.

6. The thorough investigation of *one* human being with the means at the disposal of science would make a volume.

7. All facts about human beings are important from the scientific point of view, whether those facts be immediately available or not.

8. All that is diseased is abnormal, but not all that is abnormal is diseased; thus a hand with six fingers is abnormal, but not necessarily diseased.

9. We must study the normal to comprehend the abnormal, for

10. When the normal acts in an unsuitable way, or at the wrong time or place, it may become abnormal. The fundamental conception of the abnormal is *excess* of the normal; but

11. The difference in degree between the normal and abnormal can be so great as to result in a difference of kind; just as when two fluids reach a certain amount, a precipitate is formed which is very different from the ingredients from which it was deposited.

12. Abnormal man may be abnormal in the right direction, as genius man, talented man or statesman; or in the wrong direction, as criminal, pauper or defective man. It is all *man,* and the study of these different classes might be called the anthropology of the living as distinguished from prehistoric anthropology.

13. Of all forms of abnormal humanity, crime is nearest the normal; the study of criminals, therefore, is mainly the study of normal men, and knowledge thus gained may be generally applicable to the community as a whole. Therefore,

14. The prison and reformatory can serve as a humanitarian laboratory for the benefit of society. As the surroundings of the inmates are similar, conditions for scientific research are favorable.

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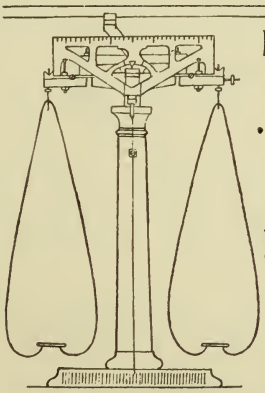

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15. As in machinery we first repair the parts out of order, so in society we first study the criminal, pauper, insane, feeble-minded and other defectives, all of whom constitute about 1 per cent. of the community. But

16. Why should we allow 1 per cent. of society to cause so much trouble and expense to the remaining 99 per cent., crime alone costing more than one-half billion dollars annually? It is mainly because of neglecting the young, where study of man should begin. For

17. There is little hope of making the world better if we do not seek the cause of social evils at their foundation.

18. No evil can be *permanently* lessened without first finding its cause. There is probably no *one* cause of anything, but a chain of causes.

19. Drunkenness is not only one of the main causes of crime, but one of the greatest enemies of humanity, because it brings suffering upon so many innocent people.

20. We cannot be tempted to do wrong unless there is something in us to be tempted; that something is a part of ourselves as distinguished from our environment; therefore,

21. The comprehensive study of man requires investigation of both individual and his surroundings, for the environment may be abnormal rather than the man.

22. Cranks or mattoids who attempt the lives of prominent persons are very important solely on account of the enormous injury they can do to society. They therefore should be studied most thoroughly.

23. Just as the physician studies his patient in order to treat him properly, so one should study the criminal.

24. The exhaustive investigation of a single criminal illustrates just how and by what steps both environment and inward nature lead to criminal acts.

25. Criminals, paupers and other defectives are social bacilli which require as thorough scientific investigation as the bacilli of physical disease.

26. No one should be held responsible for the first fifteen years of life, nor is anyone accountable for the tendencies inherited from ancestors. As the die is usually cast before adult life arrives, responsibility is most difficult to determine, and is often a minimum quantity. Therefore,

27. In judging human beings we should emphasize their excellencies rather than defects. As has been said, to know all is to forgive all; yet

28. Every person dangerous to property or life, whether insane, criminal or defective, should be confined, but not necessarily punished.

29. The determinate sentence permits prisoners to be released who are morally certain to return to crime. The indeterminate sentence affords the prisoner an opportunity to reform without exposing society to unnecessary danger; but

30. Society has no right to permit prisoners to be released who will probably return to crime; for

31. Where it is a question between justice to the individual or justice to the community, the community should have the benefit of the doubt.

32. The prison should be a reformatory and the reformatory a school; the object of both should be to teach good mental, moral

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NOTARY PUBLIC

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PROFESSIONAL BUILDING

and physical habits; both should be distinctly *educational*. There should be a minimum temptation to do wrong and a maximum encouragement to do right.

33. Institutions for reforming human beings should have the conditions as similar as possible to surroundings outside, so that when inmates are released they may adapt themselves more easily to society and not become misfits.

34. Everyone has the right to a proper bringing up; and

35. The time has come when we should study a child with as much exactness as we investigate the chemical elements in a stone or measure the mountains on the moon.

36. One purpose of criminal anthropology is, through knowledge gained by scientific study, to protect the weak, especially the young, *in advance,* before they have become tainted and fallen; not locking the barn door after the horse is stolen.

37. The treatment of young criminals should be the prototype for treatment of adults, and procedures against them should have as little publicity as possible.

38. Publication in newspapers of criminal details is an evil to society on account of the power of imitation. In addition it makes the criminal proud of his record, develops the morbid curiosity of the people, and it is especially the weak who are affected.

39. Place confidence in the so-called bad boy, awaken his ambition and teach him to do right for right's sake.

40. Put the criminal upon his honor. A criminal once said: "If they will not believe me when I tell the truth, I might as well tell lies."

41. Nothing will hinder development of the young more than the prospect of having plenty of money and no necessity to work. Idleness often leads to crime.

42. It is more important to know what is good than what is true; for

43. Increase in intellectual development is not necessarily connected with increase of morality, and education which trains the mind at the expense of the will is a questionable education.

44. The longer we live, the more we appreciate the average honest man, as compared with the dishonest talented man.

45. To any observer of life, the impracticability of pessimism and the advantages of optimism are evident. It has also been estimated that

46. Most of our thoughts, feelings and acts are indifferent; but of those remaining, three-fourths are pleasurable and one-fourth painful, indicating more pleasure than pain in the world.

47. Act as thou wouldst act, if all the consequences of thy act could be realized at the moment thou actest.

ANESTHESIA AMONG THE INDIANS.

The anterior history of ancient anesthetic agents and methods is, with some difference, similar to the works of other authors and writers on this topic, but the following research of the "Anesthesia among the Indians" is original of Dr. J. M. G. Kukay, as will be shown in this course.

It is very difficult to write on any subject of remote times without a manuscript or some other information to give some light on the writer's investigation excepting mummies, trephined skulls and the revelation of some far descendants of the Incas Indians.

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If it is not possible to know the date and name of the first discoverer of anesthesia in civilized Europe, is it possible to know this in the savage region of America prior to Columbian time? The following brief history is the way taken by the writer in his research:

In the year 1904 I have a few pages of this work, and anything in regard to this subject was a point of investigation and study for me. When visiting our American Museum of Natural History of New York my attention was called to the collection of Indian mummies, buried with a sack of coca leaves, and the trephined skulls, brought by Mr. E. G. Squier from the burials of the Incas Indians at Chiara Valley, Peru.

My first step in this research was a visit to Peru, one year after. Once in the Valley of Yucay, I began to ask of the natives if they knew the use of coca among the Indians, but no one knew anything about it. Finally I got the address of an Indian's descendant, by name Señor Juan, who lived several miles away, and I went to his camp, accompanied by a native. Señor Juan was about 90 years of age. He don't know it. After I told him the object of my visit (the writer is familiar with the Spanish language), he said: "We don't use books or any writing, but we keep all the records in the 'Quipu,' in which by the color of the cord, length, number of knots, and kind of it, etc., we record the important incidents, and by memory the non-important ones."

Can you tell me why your forefathers were buried with coca leaves? I asked.

"Certainly," he answered. "Before the Spaniards came we were more happy and rich, and when a 'Cacique' (Indian chief) or some member of his family dies, the relatives put with many other things the holly leaves."

What other use have they for these leaves?

"Oh, many," he said. "We use it even today as a tonic, to relieve pain, and chew it as you do with tobacco."

Can you explain the reason of the perforation of the skull?

"Of course," he answered. "This was done to the son or son-in-law of the dead 'Cacique,' and was a religious ceremony. If the son lived after the operation, he became cacique, but the most died after cutting the square hole in his head."

Do they use any coca leaves in the operation? I asked.

"Yes, plenty. The 'curanderos' (Indian physician) mixed in one concave stone a large quantity of leaves and water, and with another stone like a pastle trituriated them very fine to the consistency of a syrup. Then they gave slowly to drink until they do not move, and the curanderos start the operation, which takes sometimes a whole day, and all the time during the operation the men, women and children pray with their prayer-sticks."

What do they do in case the man feels pain?

"Well, they give more stuff to drink."

Did they die before the operation was over on account of the syrup?

"Very few. The curanderos have very much experience in handling the coca, and they know the danger by the color of the skin."

Have you seen any of such operations? I asked.

"No. They were used when the Incas domained this country, or on times that no Christian inhabited here."

How do you know all those customs among your people?

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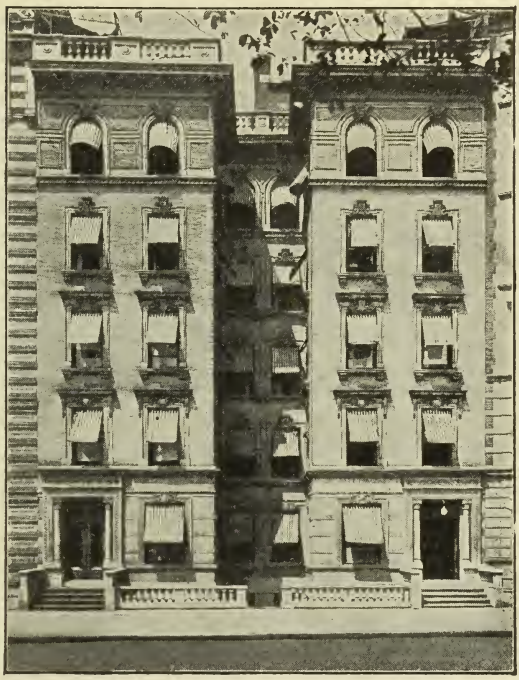

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"Easy; some by memory from my fathers, grandfathers, etc., and others by old 'Quipus.' "

After all this caudal of information, the writer went to Surco, Peru. In this place he compiled more information on the use of coca leaves; among the different uses was that they gave to eat coca leaves to the Indian women in labor time. But nobody gave so complete and important information as Señor Juan.

By this revelation and the evidence from the museum, the writer was completely convinced that coca leaves were used to produce narcosis and anesthesia by the Incas Indians of Peru, in performing surgical operations by means of knives made from copper, bronze and stone.

No one that knows the works of Dr. von Tschudi, Mr. E. G. Squier and the writer's research will doubt this statement.

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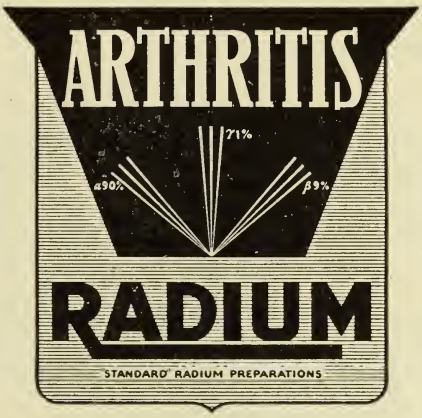

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This fraud, which was exposed at an action tried before the Supreme Court of Victoria at Melbourne, and others reported before in the medical literature, show that every physician should see that his patient gets exactly what he prescribed. No "just as good" allowed.

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IF ever direct methods are needed, it is in the relief of pain. And the application of a direct method in pain embraces, of course, the administration of a reliable and effective anodyne—and such an agent should be free, to the greatest extent, from evil effects.

A product that answers these requirements of an anodyne is Papine (Battle). Its effect is prompt and positive and it possesses a minimum of bad effects. For these reasons Papine is entitled to first rank among pain-relieving agents.

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IN the case of a great many persons who each winter suffer severely from "colds" even involving the smaller bronchi, one of the most successful means of guarding against such infections is the systematic use of Cord. Ext. Ol. Morrhuae Comp. (Hagee) during the winter season. By means of this cod-liver oil product, which is exceptionally palatable, the tissues, particularly the tissues of the respiratory tract, are increased in resisting power against microbic invasion, in which phenomenon, of course, is to be sought the explanation of the power of Cord. Ext. Ol. Morrhuae Comp. (Hagee) to reduce the likelihood of "colds."

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It is the failure of the secretory function of the bowel, together with a poor bile secretion, which, in nine cases out of ten, is responsible for constipation.

Most cathartics altogether overlook this factor and address themselves solely to a stimulation of the musculature. Some even inhibit intestinal secretion. The result is a rapid, unsatisfactory bowel movement, followed by paralytic reaction.

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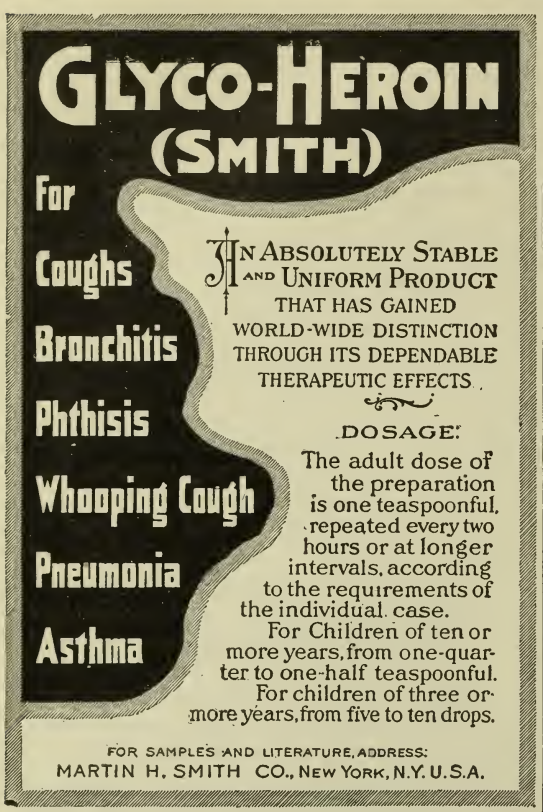
Specify the Brand!

Every now and then one is forcibly reminded of the fact that the pharmaceutical market of today contains many so-called therapeutic agents of doubtful medicinal value—agents of indefinite and varying potency. The point was well brought out, not so very long ago, by a certain chemist who purchased in the open market ten samples of tincture of opium in which the content of morphine varied from 2.7 to 22.8 per cent. Of three tinctures of aconite which he examined, one was found to contain 9 per cent. more of aconitine than the standard required, and another 20 per cent. less. Two specimens of fluid extract of the same drug contained 18.5 per cent. and 25.5 per cent. more, respectively, of the alkaloid than is officially required. Samples of belladonna showed 11.5 per cent. less of mydriatic alkaloids in the fluid extract of the root, and 17 per cent. more in the tincture of the leaves. Some tinctures and fluid extracts of nux vomica revealed an excess of strychnine—in one case of 19 per cent.

The foregoing facts are called to mind by an announcement which is appearing in medical journals over the signature of Parke, Davis & Co., bearing the title, "Fluid Extracts and Tinctures of Definite Potency," and opening with this significant question: "When writing a prescription for a fluid extract or tincture, what assurance have you that the product dispensed will be medicinally efficient?—that it will be active, yet not too active?—that it will produce the therapeutic result that you hope for and expect?"

It is well known that Parke, Davis & Co. are authorities upon the subject of standardization, chemical and physiological, and it may be confidently asserted that the practitioner of medicine who reads and ponders what is said in the announcement referred to will find that his time has been well expended. The physician's obligation to his patient, it should be remembered, does not cease with the writing of a prescription. There remains the further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Its internal administration should be reserved for the chronic bronchites with profuse expectoration. It should then be given in five-drop doses, either in a tablespoonful of water, or, when ol. morrhuae is indicated, it can be added in the proportion of five drops to a drachm of cod-liver oil, the taste of which it disguises very effectively. Whenever the discharge is purulent or foetid (bronchiectasis and foetid bronchitis), or when an antispasmodic and antiseptic effect is desired, as in emphysema and asthma, the antiseptic inhalation below will give great relief.

In all tuberculous cases Sander's Eucalyptol should not only be given internally with cod-liver oil, but the following inhalation, especially when used continuously, will change the clinical picture often very quickly and decisively: R. Acidi Carbolici, 1 dr.; Tr. Iodi, 1 dr.; Sander's Eucalyptol, 2 dr.; Spir Chloroform, q.s. 1 oz.; inhale 15 drops frequently from a Robinson's inhaler.

Sander's Eucalyptol, unlike other eucalyptus products, is non-irritating. It was introduced to the profession in 1875, and has the endorse-

ment of men like Prof. Dr. Hazard, the late Lord Lister, Prof. Dr. Mosler and other eminent physicians of the United States and abroad, who have used it in the various affections for which it is indicated, and it has, as Prof. Dr. Mosler states, "up till now always rendered me the most excellent services."

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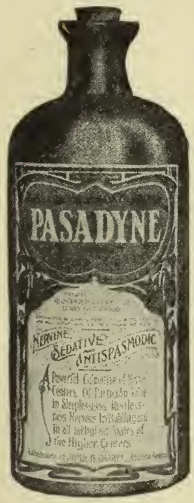

It is in irritation of the sexual centers, manifested by exaggerated desire, premature ejaculation, with lack of relief following, sleeplessness and a general instability of the nervous system, that Pasadyne (Daniel) will exert a marked influence of a beneficial character.

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When properly prepared for the table it has a rich chocolate flavor, is without lumps or sediment, and shows no fat on the surface. Differing from other cocoas, it is quite essential for best results that the directions be explicitly followed.

Phillips' Digestible Cocoa furnishes a valuable substitute for tea or coffee for daily use, being devoid of their deleterious effects. A superior drink for children, and nervous, delicate or nursing women. A most desirable acquisition to the sickroom, for the invalid and convalescent. Recommended for all domestic and dietetic purposes.

Vaso-Motor Derangements.

THE part played by the vaso-motor system in countless diseases is at last thoroughly recognized. As a consequence, circulatory disorders are among the most common functional ailments that the modern physician is called upon to correct. Various heart tonics and stimulants are usually employed, but the effect of these is rarely more than temporary. To re-establish a circulatory equilibrium that offers real and substantial relief from the distressing symptoms that call most insistently for treatment requires a systematic building up of the whole body. Experience has shown that no remedy at the command of the profession is more serviceable in this direction than Gray's Glycerine Tonic Comp.

For nearly 20 years this standard has filled an important place in the armamentarium of the country's leading physicians. Its therapeutic efficiency in restoring systemic vitality and thus overcoming functional disorders of the vaso-motor or circulatory system is not the least of the qualities that account for its widespread use. The results, however, that can be accomplished in many cases of cardiac weakness have led many physicians to employ it almost as a routine remedy at the first sign of an embarrassed or flagging circulation.

The History of Medicine.

THE old saying, "There is nothing new under the sun," is of interest when we review the history of medicine.

As a rule we refer to Hippocrates, 460 B. C., as the "Father of Medicine," yet the Egyptians consider Thoth and the Creeks Hermes originators of medicine one thousand years before Hippocrates. As early as 1700 B. C. pharmacy was practiced in Egypt and Moses laid down the laws of public hygiene, while in 4000 B. C. the old Babylonian Tablets show words for the heart, liver, lungs, kidneys and other organs.—*When Did It Happen? Published by Reed & Carnrick.*

ABOUT the middle of the sixteenth century, Michael Servetus, a Spanish physician, made a distinct advance in the art of prescribing, introducing more palatable drugs, avoiding incompatability and suggesting vehicles.—*When Did It Happen? Published by Reed & Carnrick.*

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